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PSYCHOLOGY AND PHILOSOPHY.

I.—PHILOSOPHICAL DEVELOPMENT.

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IN contemplating the historical development of speculative philosophy we must recollect the ultimate problems of primary human interest which the philosopher tries to solve. There are three central ones of this sort, concerned severally with God, Man and Matter, in subordination to which the others may be arranged. Each of these three is so connected in reason with the others that, while a philosopher may put any one of them in his foreground, he cannot separate it entirely from the other two. Let us look for a little at each.

I. It is told of Bishop Butler that, in conversation one day with his friend Dean Tucker, he suddenly put the question,—whether communities, and even whole nations, might not be seized with fits of insanity, just as individual men sometimes are. "I thought little," the Dean shrewdly adds, "of that odd conceit of the bishop at the time; but I own I could not avoid thinking of it since, and applying it to a good many cases of nations and their rulers."

Butler's 'odd conceit' suggests the philosophical problem about God. For the question about the insanity of nations

might be expanded and translated into this form:—'Why may not the Universe, into a dim perception of which we all awake in the first exercise of our senses,—why may not the universe, in its ever-changing phenomena of matter and mind, be really the manifestation of Power that either is insane or that may become insane? Have we any guarantee against the insanity, the irrationality of the supreme directing Power, and the consequent absence of reason from the nature of things? How can we justify the faith of common sense, which, alike in daily life and in the experiments, previsions and verifications of science, assumes that we are living in a Cosmos; for may it not at last turn out that we are living in a physical and moral Chaos? Why may not the supposed order in nature, or reason in the nature of things, turn out to be purposeless unreason and illusion; so that all our reasonings about things—all our mental assertions and denials even—become paralysed and worthless?'

Descartes, who represents the rise of the modern spirit, was led into philosophical speculation by the pressure of questions akin to these. We all know how he came to ask himself whether he was really justified in presupposing, as all people practically do, that the strange world into which sense-perception introduces us cannot be illusion, and must be valid experience. May it not be an expression of unreason, or else of the malignant calculations of the Power by which its changes are determined? Why should the omnipresent influence be wise Reason, and not blind caprice or meaningless contingency? Yet, in conduct as well as in our scientific previsions, we indulge the faith, that law or reason is latent in nature, and indeed only thus could things be reasoned about or experienced.

Much of the philosophical speculation that we find in history is the issue of endeavours to find what can be answered to questions of this sort. Reflective men have indulged in it, because they wanted some ultimate guarantee that the worlds of nature and spirit are not, and cannot become, insane, and thus unfit to be experienced intelligibly. Philosophy has accordingly in our own day largely taken the form of a reasoned criticism of experience from within. It tries to show the coherence of experience, as an organic unity that is so in harmony with itself that no rightly exercised human understanding can ever be put to permanent confusion by its latent contradictions. In other words, it is an endeavour to exhibit GOD or perfect reason latent in all, by articulating the divine reason and moral

purpose according to which all physical and moral experience is constituted,—thus unfolding the intellectual secret that is in the heart of things. The philosophical conceptions of the universe as universal reason into which some reflective persons thus rise is *their* philosophy. In their case the problem in the foreground is concerned with God.

II. But a humbler inquiry than this has drawn others into philosophy: an inquiry in which Man—not τὸ πᾶν, the All, with order, reason, purpose therein immanent—is the immediate object. For inquiry into the intellectual and moral capacity, the origin and destiny of man is a potent factor in stimulating reflection,—in the recognition that men each emerge at birth, separately and alone, out of the darkness of unconsciousness, and that individually we gradually advance more or less into the light of self-conscious personality and an always incomplete knowledge, all which at death seems to relapse into unconsciousness. This self-conscious life, between birth and death, is virtually *our* universe for each of us, knowable by each under the conditions implied in this transitory glimpse. What, then, are the limits within which this merely human knowledge of the appearances presented by reality must be contained, and what its certainty or trustworthiness? If all human understanding of things is necessarily disproportionate to the reality, is this imperfect experience of any real worth to its possessor? And what is the origin and final destiny of the individual self-conscious persons who, in the interval between birth and death, receive this incomplete experience? Is each to continue for ever in its separate conscious individuality, or do we all relapse into the darkness of unconsciousness from which we emerged for our hour into the conscious life in which for us eternity differentiated into time and change? Is each man a 'mode' of the One Being which, whether insane or not, whether transcendently conscious or unconscious, is at least conscious in those modes of itself that we call 'persons'? What, on the whole, is the meaning for me of the thus limited self-conscious experience in which I now find myself, and out of which I cannot rise; and what conduct is obligatory on me individually, and as included in the organism of Society, by virtue of this meaning? Such questions as these about Man have in all ages, but especially in the modern world since Locke, been powerful motives to philosophical reflection. Indeed, the philosophical questions about Man are mainly three—What we now are? How we have

become what we now are? What we shall individually become hereafter? Of these three the second, treated as a question of natural science, is the most prominent just now in the popular mind. Yet surely the other two have more philosophical relevancy and human interest. For if we find ourselves endowed now with a spiritual constitution, with reason and conscience, and will and sense of responsibility, each of these in a limited degree; and if the active reason in each enables each in some considerable degree to forecast the future, then it less concerns our highest relations to know by what physical steps mankind have become what they now are,—whether by sudden acts of what is popularly understood by 'creation,' or by the slow, continuous process, at once natural and supernatural, called 'evolution,' which is a constant (it may be unbeginning) creation. Man being what he is, he does not become other than he is, because physically he is the issue of unconscious organisms which have themselves been evolved from molecules of matter. For he is this only at the point of view of natural or physiological science, which cannot as such entertain the philosophical, which is the theological, problem about Man and Nature. Natural science inquires what the processes in external nature are, according to which, or conditioned by which, man as we find him came to be what he now is, and it tries to determine the organic law of these processes. Philosophy, on the other hand, asks whether there is law or order in nature at all, and why; and whether man in his present constitution does not share in the spiritual or supernatural through his will and reason, as well as in nature through his organism. Thus science, within its own sphere, can never conflict with religion and philosophy. Its utmost discoveries can only illustrate them. All this suggests the third great philosophical problem, which puts Matter in the foreground.

III. For we find that we are individually separated from one another, through personal connexion with the solid and extended organisms in which we each become conscious of separate personal existence, and mediately also of the existence of other separate conscious persons more or less like ourselves. That is to say, we live and move and have our being in a world of sensible things, which occupies space (whatever that may mean), and with which, in and through that small organised portion of it which each calls 'his own' body, we are daily in contact and collision. Now, what does this mean?—this matter and

energy which thus environs and expresses the self-conscious activities that are associated with it in the system of nature? We think of the phenomena that are presented to our sight and touch as manifestations of 'something,' as qualities of a substance which we call Matter. But what is this 'something' to which we attribute the manifestations which greet our senses? Are we who are percipient of the manifestations, along with our whole self-conscious life in all its spiritual contents, only one sort of manifestation of the solid and extended substance which we touch and see, a sort which breaks forth under special conditions of physical organisation when nerve-tissue is somehow irritated? Are natural force and the (so-called) 'agency' of matter its own self-existent and independent endowments, in virtue of which it blindly operates without reason or purpose?—Or is the reverse of all this true? Are the things of sense, with their supposed natural powers, only modes in which the immanent yet transcendent Reason expresses itself, while it is itself the cause and explanation of the universal and eternal prevalence of law, order, reason in nature, whether mechanical laws like gravitation or physiological laws like evolution? In the ultimate analysis of philosophy, does matter and energy come out as the primary principle,—self-consciousness, which finds this out, being only secondary or derived; or is self-conscious spirit the original reality, and, in the deepest and truest sense, the 'real'? On this second alternative, does the 'world' of sense, with its so-called 'laws of nature' and 'natural agents,' presuppose the constant creative agency of Active Reason,—nature being thus throughout and always supernatural as well as natural in its orderly evolution or continuous creation; interpretable only in part, and only in its mechanical relations, in physical or natural science, but, when viewed philosophically, found to involve the immanence of Supreme Reason and the purpose of Perfect Will? May not the final end or purpose of the material world, in the successive integrations and disintegrations of its unbeginning and unending evolution, be—to enable finite or individual conscious spirits to become aware each of his own existence, to become cognisant of one another, and to become more distinctly conscious than at this stage of their existence they could otherwise be of the eternally active Reason and Will in which we all live and move and have our being?

To the questions in each of these groups the epistemological inquiry of Locke and Kant, as to the *extent* of

human knowledge, applies. Can any *man* say that he *knows* the true answer to them, or that he can do more than accept the most probable of the possible hypotheses by which the problem might be determined? Can any theories about the origin of the universe, and of its natural laws, or about what the actual laws are according to which its phenomena are determined—be it law of gravitation or law of evolution or any other,—can any such conclusions be absolutely demonstrated? Can more be found out by man than that some one conclusion is immeasurably more probable than any other conclusion that is conceivable; and that, accordingly, until it is disproved, or shown to be less probable than some other, it ought in reason to be believed? Does our belief that the sun will rise to-morrow rest at last on a firmer ground than this, or (more generally) our belief in any alleged event in the past or future history of the universe? Can physical or natural sciences, as formed by man out of an experience that is presupposed to be essentially or ultimately reasonable, ever be for him more than systems of conclusions determined by a balance of probabilities?

Much of the human value of philosophical inquiry consists in its making the thinker even conscious of questions like these. If he fails to find complete answers, his mind is at any rate widened when he realises how they underlie the whole surface of common experience. The questions are latent in the individual mind till they are made patent by reflection, when it is quickened into exercise by sympathy with the great reflective minds of the ancient and modern world. And reflection leads into one or other of the three questions about God, Man and Matter:—Is Reason, or is purposeless unreason, at the root of things and of my individual life? What am I; what can I know and do; and what shall I become? What is the deepest and truest meaning of the sense-presented, or visible and tangible, world with its 'natural' laws?

The human interest of constructive philosophy consists in its being the progressive issue of continuous effort, on the part of a few persons in each age, to think out for themselves adequate and coherent ideas concerning their destiny and duty in a universe presupposed to be rooted in reason and goodness. The philosopher differs from the man of ordinary common sense only in that he tries either to *articulate* in system the reason and goodness that is presupposed to be expressed in the behaviour of things; or else to show articulately why, in consequence of man's merely

finite point of view, the articulation cannot be fully worked out into perfect unity of system, but must for him remain 'broken,' or a mysterious faith, even at the last,—unless the human individual can rise into Omniscience, and see what exists from the Divine Centre.

When we turn from the problems of philosophy to the actual history of man's philosophical endeavours and their results, a curious, even pathetic, spectacle is presented. Instead of an attained "vision of the world and the wonder that shall be," we see a Sisyphus-like toil—sects of thinkers, in controversy with one another, exhausting their strength and ingenuity in the production either of 'systems' or of sceptical negations that wax and wane—that dissolve almost as soon as they are formed—to be replaced by others, or by the old ones in new forms. A perennial discussion of the same problems, in manifold verbal expressions of them, few in number as appears when we penetrate beneath the varied ways of stating them; which receive in the course of ages similar, but dissimilarly expressed, sets of discordant solutions, or else a similar announcement of their permanent insolubility, from rival sects — none of the offered solutions or insolubilities finally annihilating its rivals. And all the while, the spontaneous or unreflective living experience of men, of which philosophy, generated in the minds of the few, should be the ultimate intellectual interpretation, maintains itself independently of them all from generation to generation.

There is a pathos in the birth-throes of successive philosophies, put forth, often dogmatically, by their projectors, as the deepest and truest explanations of the intellectual secret of man's life in the universal system of things; with the joyous anticipations of their sanguine authors, each confident that the 'secret,' or at least the way to find it, has been at last revealed to *himself*. To confine illustrations of this to modern philosophers, we find Descartes confident that he had found a method destined to solve the ultimate problems as certainly, as luminously, as the mathematicians of his day were solving problems of abstract number and quantity; or Malebranche, pictured by Fontenelle as obliged anon to turn his thoughts to something else for relief from palpitation of heart produced by sanguine sympathy with the intellectual perspective which Descartes had partially opened to his view; or Spinoza, confident in his demonstration of a unity which seemed to reconcile the duality of thought and extension left unexplained

by Descartes; or Leibniz, aglow with his discovery of the universal order in the continuous development of monads, according to the established harmony of the sufficient reason; or Berkeley, carried away in astonished enthusiasm at the comprehensive sweep and simplicity of his new philosophical conception of the meaning of matter and its powers, and of the sensible world—a conception which was to relieve scepticism, and remove sectarian divisions from philosophy in all future time; or Kant, with his promise of victory to the often disappointed philosopher, if he would turn over a new leaf under Kant's guidance as the Copernicus of the intellectual world; or Fichte, in the confidence of infallible truth, imprecating judgment on those who should reject his new Idealism; or Ferrier, with his demonstrations which were to illuminate the universe from "stem to stern"; or Hegel, with his dialectical evolution of the rational organisation of Nature and Spirit, produced almost contemporaneously with the pan-phenomenalism of Comte, who, like Hume, relegates all constructive philosophy—theological or metaphysical—to the limbo of illusions which belong to the earlier and ruder stages of man's history. This Sisyphus-like toil of over-confident theorists has landed the generation in which we live in a war of cross-purposes between two confident extremes—those at the one extreme proclaiming that All is light, in a fully articulated reason, and those at the other extreme that All is at last lost in the darkness of unreason; each remaining equally confident in their constructive and in their negative conclusions, after hearing the argument on the opposite side.

Deeper insight into the meaning of this historical drama, and more candid interpretation and appreciation of opposed tendencies, may perhaps so transform the scene as to make it less discouraging to those who are now about to make their own fresh adventure on the ocean of philosophy, in an honest search for the best intellectual expression of that on which our lives, and our beliefs (without which we cannot live), rest in the end. It is surely only one side of the truth that David Hume proposes when he says, that every philosophy owes its success to its novelty, and that it is no sooner canvassed with impartiality than its weakness is discovered. Philosophies seem to the superficial observer of history to pass away without leaving a trace of their transitory dominion. He fails to see in their succession the long education of human understanding; or the adaptation of each to the particular age, with its characteristic experience,

in which it flourished. For, after all, surely through the sects and systems of the past an unceasing, if often an unconscious, "purpose" (unconscious often to the philosophers themselves) has all the while been running, so that the philosophic thought of mankind has gradually "widened with the process of the suns". All true-hearted intellectual endeavour must advance that purpose, while it educates the individuals who engage in it. So long as we "sit still," we are, according to the Greek sage, "never the wiser," but "by going into the river, and moving up and down, we discover its depths and shallows". If we exercise and bestir ourselves we may, even in this life, discover something of its philosophic secret, although we may not fully realise the Divine or Perfect Insight.

For, has not the seemingly confused and self-contradictory philosophic past really been a struggle between, on the one hand, successive Idealistic Constructions, in which the secret of Real Existence is professedly evolved out of a single principle, and, on the other side, the different phases of Sceptical Nescience—materialistic, pan-phenomenalistic, agnostic—with their pessimist despair of the immanence of reason or rational purpose in things? And is not the perennial issue of the struggle—as Idealisms are gradually widened and corrected by sceptical criticism and by enlarging human experience—a gradual approach to the philosophy which corresponds to the true intermediate between absolute Ignorance and the Divine Idealism, which in its infinity evades the philosophic grasp of a human understanding? Has not the philosophic drama—especially as enacted in the last two centuries since the publication of Locke's *Essay*—been a struggle between two antithetical conceptions of man's intellectual relation to the universe, which is issuing, by a composition of forces, in a deepening reverence at once for the facts and the mysterious rational implicates of his physical and spiritual experience? Are educated men not now becoming more ready to acknowledge that "things are what they are, and not other things than they are"; and to ask themselves "why, therefore, should we allow ourselves to be deceived?" Thus one seems to hear three conflicting voices throughout these centuries. The response made by one of these to the three great philosophic questions is:—'I can *see nothing*, nor even reason for having faith in anything, beyond the momentary, ever-changing data of sense'; —adding, nevertheless, with monstrous inconsistency, 'I *have* faith all the same in the inductions of physical

science, so as to be sure that the sun will rise to-morrow, although this future event has not been a datum either in my senses or among my conscious states'. A contrary utterance to this comes from another voice:—'I *can see the universe through and through*, in the light of its immanent rationality, and am so in possession of its secret that I am able to dispense with faith, by rising into a philosophy that moves in a sphere aloof from the irrelevant events and probabilities of the changes in space and time'. These two voices are apt to overbear the third, with its recognition, as the final lesson of reason, that individual man can understand only 'in part,' even although possession of any knowledge seems to imply that the whole should be seen in order that the part even may be visible. 'I see enough,' it proclaims, 'to justify to reason the *faith* that I am living and moving and having my being in a universe in which the merely natural is subordinate to, yet in harmony with, the moral and spiritual order and purpose which my higher being requires; and I also find that the more I cultivate this faith by philosophical reflection the better I can see the little that can be conquered by practical reason, and the more wisely I can shape my life.'

The first of these three voices is that of the philosophic Sceptic or Pessimist, who in modern times has essayed, in the words of David Hume, "a sceptical solution of sceptical doubts," under the self-contradictory name of Agnostic Science. The second is the voice of Gnostic Omniscience, in which the speaker confesses, nevertheless, that he fails to bring the 'probabilities,' on which man's life turns, within the range of his Omniscience.

The impossibility of remaining in a state of universal scepticism, which is logically incapable of either speech or action, on the one hand, with the failure, on the other hand, of the successive attempts to see All in the light of a single rational principle—or, as we might say, to see All from the Divine central point of view—is what leads the philosophic thinker who recognises ineradicable facts of moral experience to enter the *intermediate* path. Here he may deepen his intelligent sense of the reasonableness of the universe, sufficiently, at least, to justify inductions of natural and spiritual laws, which, when so justified, are more than 'leaps in the dark,' since they are then made in the philosophical assurance that facts and events can never put our physical and moral intelligence of the universe to permanent confusion. To follow this path,—intermediate

between complete Nescience and Divine Omniscience,—is to recognise that men, who are the individual thinkers of all human philosophies, are neither mere animals nor identical with God, but are, through their sense-organisms, sharers in nature, while, through their active reason, they participate in the Divine. A philosophy which looks only to man's *organic* participation in *nature* is logically atheistic, or at least agnostic, and, if logical, is in the end completely nescient. A philosophy which sees the infinite macrocosm in our microcosm, and thus fully identifies itself with the divine knowledge, is logically acosmic and pantheistic. But what is man, as Pascal asks,—in the spirit of the philosophy of the intermediate,—what is man amidst the realities which encompass him? In one view he seems individually lost in Infinity: in another view he is as Nothing. He must therefore be the medium between these extremes,—alike distant from the Nothing from which he was taken, and from the Infinity in which he seems to be swallowed up. The intermediate is thus characteristic of all our faculties. We are equally unable to know all and to remain ignorant of all. The words applied by Bacon to theology seem also to apply to the only permanent philosophy that man is capable of having regarding the universe of his sensuous and spiritual experience:—"As for completeness in Divinity it is not to be sought. For he that will reduce knowledge into an art or science will make it round and uniform; but in Divinity many things must be left abrupt." So too we may have philosophy, but not a philosophical system which explains all.

Take an illustration of this composition of philosophical forces. It was in reaction against traditionalism, and the dogmatic or uncritical demonstrations of the schools, from which neither Bacon nor even Descartes had fully emancipated themselves, that, for example, John Locke, at the commencement of the philosophic era in which we live, sought—by his polemic against "innate" ideas and principles, and by his analysis of the genuine ideas and certainties and probabilities that are gradually attained in the exercise of our faculties—to administer a check to *a priori* assumptions, unwarranted by experience, and to empty verbalism. Locke invited a new philosophical departure. He began by recognising that every philosophic thinker, as human, has to occupy an intermediate position between the animal and the Divine, where his knowledge must come "far short of a universal or perfect comprehension of what

science is," and at which, for the most part, "probability only is to be had, which is sufficient to govern all our concernments". This was a departure from the point of view of a human Epistemology, not in abstract Ontology. Philosophy had previously been recalled to this human or intermediate ground by sceptical pressure, in hope of finding relief from doubt or nescience in a deeper and truer estimate of man,—for instance, in the Socratic reaction against the agnosticism of the Sophists. In Locke's case it was with the opposite motive of testing traditional dogmatism by reason and experience, so as to clip the wings of Idealistic Omniscience, which, by help of verbal abstractions, concealed from itself its own failure to eliminate all mystery, and to substitute perfect rational insight for faith and presumptions of probability.

That Locke was moved mainly by the second motive explains much in his *Essay*, and in that evolution of thought onwards to this day which *his* recall of philosophy to the intermediate may be said to have inaugurated. For his proposal that we should examine our own abilities, and see what objects our human share of understanding is or is not fitted to deal with, was made, not because he found the current of opinion in the latter part of the seventeenth century running towards a sceptical despair of the power of human understanding to make any way at all in the interpretation of the data of human experience, or because he wanted to make men more intrepid in their speculations. It was for an opposite reason—because he suspected that men claimed, under the name of "knowledge," more than could be justified by a true philosophy. He found that they had been "letting loose their thoughts into the vast ocean of Being, as if all that boundless extent were the natural and undoubted possession of our understandings, wherein there was nothing exempt from its decisions, or that escaped its comprehension". The *Essay* is virtually an inquiry whether past failures to reach truth may not be due to our assuming, either as uncritical traditionalists or as dogmatic rationalists, to put ourselves virtually at the Divine or central point for viewing the universal reality, instead of seeing that our human individuality necessarily withdraws us, as it were, from the centre, and keeps us at the side, where much must remain out of our sight, and where things, under finite relations of time, must appear at a different intellectual angle. He accordingly inquired what could be seen from the side-position, or from the point which men, as finite persons, have to occupy intellectually. The *Essay*

thus returns again and again to the contrast between the few points of light or knowledge within our human horizon, the many points at which we have only the dim twilight of probability, and the boundless realm of darkness which surrounds both ;—all suggesting the moral advantage to us of dwelling much throughout our philosophic thinking upon the enigma of a human life, in its intermediate between Ignorance and Omniscience.

It was perhaps inevitable that Locke, disposed by temperament as well as by his surroundings to keep before him the danger of dogmatic claims to something like omniscience rather than the danger of sceptical despair, should be more apt to see the weakness of human understanding and the limits of human experience than the abstract constitution of the Universal Reason in which man shares, or even the distinctive facts of his moral and spiritual being ; and that his own philosophy should thus draw more towards the extreme of Nescience than of Omniscience. All this was in the spirit of the age in which he lived, and of which he was eminently the intellectual representative. In the latter part of the seventeenth century, the presuppositions of dogmatic theology, supreme in the middle ages, followed by a century of theological controversy and religious wars, were becoming objects of free criticism. At the same time, the tendency to bring every belief before the tribunal of the merely generalising understanding, judging according to the categories of sense only, was gaining strength in England, through the astonishing rise of mechanical science of external nature. Thus the philosophy formed by its representative mind, in an age when philosophic imagination was weak, and which was reacting even in excess against the pressure of the Past, was naturally disintegrative in its influence more than constructive and idealistic. Locke's aim was to dissolve and disperse empty verbalisms and the prejudices inherited from the Past, which he assailed under the name of " innate ideas " and " innate principles ". He wanted to induce a collapse of verbal formulas and dogmas that were imposing themselves in the place of " experience "—not sparing even Descartes and Bacon. When he engaged in his *Essay*, Cartesianism had been passing into Spinozism, and all along its course it seemed to Locke to be too much a " letting loose of thought in the vast ocean of Being ". Even Bacon's sanguine anticipation of a coming science of nature which should disclose its " fixed, eternal, universal principles " seemed to Locke to need the check which he so often administers in the *Essay*, to those

who vainly imagined the possibility of a "demonstrable" physics; and there, in support of this check, he insists upon man's inevitable *a priori* ignorance of the relation between the innumerable secondary qualities of matter and its few primary qualities.

Accordingly, one is not surprised that Locke, as the philosophical spokesman of his own age and indeed of the eighteenth century, was unconsciously led towards that narrow and incomplete conception of man, and his insight of things, which represents him as ending in sense and empirical understanding, generalising according to sense. Imagination, spiritual reason, emotion, conscience and thinking will,—on all which the *comprehensive* settlement of philosophical questions depends,—are left out of sight, or, at least, are attenuated. An experience that *ends* in sense and empirical generalisation must end incoherently and must contain the seeds of nescience, through its oversight of the larger and richer human life that is due to the factors of our moral and spiritual experience—often latent in individual men—which are the key to a metaphysical interpretation of the universe at the human or intermediate point of view. From hence come to us—

> "Those shadowy recollections,
> Which, be they what they may,
> Are yet the fountain light of all our day,
> Are yet a master light of all our seeing;
> Uphold us, cherish, and have power to make
> Our noisy years seem moments in the being
> Of the Eternal Silence: truths that wake
> To perish never;
> Which neither listlessness nor mad endeavour,
> Nor man, nor boy,
> Nor all that is at enmity with joy,
> Can utterly abolish or destroy".

It was thus the tendency of Locke's philosophy—a protest on behalf of the right and duty of the human understanding to judge according to "experience"—to send the main current of thought in the eighteenth century in the direction of analysis and disintegration. Accordingly, before the middle of the century, constructive philosophy disappeared in Hume's "sceptical solution of sceptical doubts". Hume thus called out Kant in *his* turn, to resume, at a different point of view, the epistemological problem which Locke had tried, in the iconoclastic and empirical spirit of the time, to solve in the interest of individual liberty, to understand according to "experience". (In the ambiguity of the term experience lies the ambiguity of Locke's philosophy.) The

course of European thought from Locke to Hume represents the disintegrative tendency, even as that from Hume, through Kant, to Hegel tends steadily towards an idealistic integration or construction. But this composition of the philosophic forces, within the last two hundred years, has surely on the whole deepened and enriched the philosophy of mankind; and it may correspondingly educate the minds of those who, as students of its results, try to re-think the destructive and constructive speculations which have been developed in its course. The two centuries since Locke correspond in significance in modern philosophy with the memorable century of Socrates, Plato and Aristotle in the ancient world; but the one era originated in reaction against scholastic dogmatism, and the other in reaction against the scepticism of the sophists.

The conscious realisation, in the mind of an individual man, of a philosophy or philosophical system, must of course depend upon the actual intellectual development of that individual. The ultimate interpretation of self-conscious life and the universe which prevails among thinking men in any age or country thus depends upon the degree in which the spiritual faculties, originally latent in each of us, are then and there drawn forth into conscious exercise. When—as for the most part in the eighteenth century—external observation, mechanical association of ideas and empirical or merely generalising understanding are the mental characteristics, while the higher spiritual faculties are left in their latency, as at birth, then the prevalent philosophy inevitably tends to a self-contradictory scientific agnosticism and to theological nescience. On the other hand, when reflective thought is exaggerated, so as to leave the sense-faculties comparatively dormant,—as with some mediæval and some modern schoolmen,—abstractions then supersede concrete things and persons, and the resulting philosophy is a web of speculations, ingeniously spun out of the philosopher's thoughts, in disregard of the moral facts which would leave the thought abrupt. But the philosophy which corresponds to the spiritual experience of the complete man illustrates at once the need and value of the empirical methods in their own sphere, as well as their harmony with that of the natural sciences to which they lead, in subordination to the universalising reason, which sustains faith in God and connects us with the infinite. "Those," says Leibniz, "who give themselves up to the details of sense and to the external sciences usually despise abstract speculation and Idealism. Those, again, who

live among universal principles rarely care for or appreciate individual facts. But I," he adds, "equally esteem both." Bacon, too, profoundly remarks, that "those who have handled knowledge have been too much either men of mere observation or else abstract reasoners. The former," he continues, "are like the ant; they only collect material and put it to immediate use. The abstract reasoners again are like spiders, who make cobwebs out of their own substance. But the bee takes a middle course: it gathers its material from the flowers of the garden and the field, while it transforms and digests what it gathers by a power of its own. Not unlike this is the work of the philosopher. For a true philosophy relies not solely on the power of abstract thinking; nor does it merely take over the matter which it gathers from natural history and mechanical experiments, only to lay it up in the memory as it found it; for it lays it up altered and digested by the rational understanding. Therefore, from a closer and better considered alliance between these two faculties—the empirical and the rational—such as has never yet been fully realised, much may be hoped for philosophy in the future."

Thus it is that each person, according to the completeness of his developed humanity, is the measure of the philosophy which *he* is able to attain to, or in other words, to verify by his own consciousness. This is the measure of the system which he individually can either form for himself, or as a student mentally assimilate and rise into. One who has been accustomed to conceive reality only under the mechanical categories of physical science—who sees in *ultimate* causality only the necessary connexion of phenomena with *preceding phenomena*—cannot even entertain a spiritual philosophy, any more than one born blind can imagine colours in their varieties. We have Darwin's remarkable confession of his own loss of spiritual insight, through exclusive habits of external observation and scientific specialism. "I well remember my conviction," is his touching testimony, "that there is more in man than the mere breath of his body. But now the grandest scenes would not cause any such convictions and feelings to arise in my mind. It may truly be said that I am like a man who has become colour-blind; and the universal belief by men of the existence of redness makes my present loss of perception of not the least value as evidence." Other testimony might be quoted to the dormant state in individuals of the faith in natural law and order, through an exclusive study of the universe from the supernatural point of view. It is thus that

those factors of the complete mental experience of man,—of the physical and also of the rational or spiritual experience,—which find no response in merely empirical generalisations in the one case, or, in the other case, in an interpretation of the supernatural as what is inconsistent with nature and natural law, instead of (as it may be) comprehensive of both—it is thus that one or other of those two factors subsides into latency, or perhaps never comes into consciousness at all in the individual. God is concealed, not revealed, by the world of the senses when its phenomena *alone* are apprehended,—as by the scientific specialist, who disregards the immanence of the supernatural or metaphysical in all nature. Only when he rises above this mere specialism does the (otherwise merely empirical) observer possess the mental material, so to speak, which gives their meaning to the words that express the fundamental ideas of the spiritual and intelligible world. Cardinal Newman (whose name I introduce with reverence) truly remarks that it is "a great question whether Atheism is not as consistent philosophically with the phenomena of the physical world, *taken by themselves*, as the doctrine of a supreme thinking Will; and whether it is not, so far, the consistent philosophy of those who close their eyes to all beyond the phenomena of the senses and their succession, without realising in their own consciousness any deeper or truer experience than this". An empty 'Something' behind sense-appearances is in fact the only 'God' recognisable by one who looks only to the phenomena of sense and their laws,—thus turning his back upon the rational constitution and ultimate unsystematisable facts of physical and moral experience, and so leaving undeveloped in himself the supernatural elements of universalising Reason and conscious recognition of free responsible Will.

This imperfect one-sided experience in the minds of individuals is, of course, common in times of extreme devotion to the sciences that are concerned only with external nature,—like that in which we are now living, or like that into which Locke entered when, with his early medical training and utilitarian disposition, he began to philosophise for himself. "The mere mechanical philosopher" (*i.e.*, the specialising physicist), says Berkeley, in *Siris*, "inquires properly concerning the rules and modes of operation alone, that is, the connexions between facts and coexisting or preceding facts, and not really concerning their originating Cause; *for nothing mechanical is or can be a Cause.*" He professes to 'explain' phenomena of sense by means of

other phenomena of sense only. He thus becomes blind at last to the truths that all such (so-called) 'explanations' need themselves to be explained; that the special laws of nature, and the very fact and presupposition that there *is* law and not chaos is part of the philosophical problem; and that an insight of the *ultimate* explanation presupposes the higher faculties of reason, conscience and will, with their correlative faith, in active exercise, all making their contribution to the individual's stock of verifying experience. After this education is accomplished, is not man found in fact *not* to end in sense, and in merely mechanical conceptions of the data of experience? Are not moral reason and free intending will even supreme in the idea of the human microcosm;—and so, by analogy, rightly concluded of the Macrocosm, as also therein supreme? Is it not our duty then to think of the universe in which we live and move and have our being, as rooted in moral Reason and free intending Will, so that, in the deepest meaning of 'reality,' only the spiritual can be called real?

Thus it is that an inadequate education of the individual spirit leads to an inadequate, that is, to a sceptical or agnostic, philosophy. When, in consequence of this incomplete education, the word 'cause,' for example, *can* mean to the individual no more than 'antecedent or coexisting phenomena,' then man himself, regarded only as a part of nature and as thus sufficiently explained, is consistently enough dealt with as only one kind of natural organism, all in him that a deeper insight verifies as essential having been eliminated. For a part of man, doubtless, may be measured by natural science; men are partly animals, and so within its range. Yet, if man shares also in universalising reason and in thinking will, if he is the creator of acts for which he is responsible, then he also shares in the supernatural and divine; and even 'Nature' itself, whether within or outside the human organism, could not be what in our sense-experience it is found to be, without the immanence of the metaphysical or supernatural in its very constitution.

These considerations may help to show why successive philosophical systems, and also the philosophies which are not complete systems but left 'abrupt,' have one after another failed to verify themselves in the mental experience of mankind—why, in consequence of this, they have waxed and waned throughout the ages. Moreover, an

honest attempt to comprehend the universe in the light of its really ultimate conceptions is the most arduous enterprise in which a person can engage. Its even partial success requires a completeness or catholicity in the verifying mental experience which cannot be reached, still more cannot be sustained, without the pain of that fatigue which is inseparable from reflection. The very entertainment in consciousness of the problems (or questions) of philosophy is fatiguing. Accordingly, philosophical words, emptied of their once intended meanings, which it was so hard to think and to retain in living thought, are apt, as meaningless sounds, to be substituted for the philosophical insight of the man of genius who adopted them to express what *he* consciously meant. Through this natural indisposition to continuous reflection, the philosophical successes of epoch-making thinkers are lost almost as soon as a 'new' system has been verbally adopted by the mob of men, with their narrow experience and half-developed spiritual life. Like a sudden transitory flash of light, the discovery of philosophic genius becomes obscured even in the mind of the philosopher himself in his less reflective hours. Hume's account, in his *Treatise of Human Nature*, of the disappearance from his mind of his own sceptical philosophy, after he returned from his chamber of meditation to the common affairs of life, is an extreme illustration:—"Where am I," he asks in his philosophic mood, "or what? From what causes do I derive my existence, and to what condition shall I return? Whose favour shall I court, and whose anger must I dread? What beings surround me; and on whom have I any influence, or who have any influence on me? I am confounded with all these questions. . . . But nature herself cures me. . . . I dine, I play a game at backgammon, I converse and am merry with my friends; and when, after three or four hours' amusement, I would return to these speculations, they appear so cold, and strained, and ridiculous, that I cannot find in my heart to enter into them any further. . . . These are the sentiments of my spleen and indolence." Fichte's life supplies another illustration. Indeed, all, I dare say, whether philosophical geniuses or not, who have honestly tried to think the universe philosophically, in the light of man's *complete* mental and moral experience, must have had illustration of the 'waxing and waning' of their own philosophies (for we all have our philosophies, good or bad, consciously or semi-consciously held), in the history of their own minds—reflective exaltation followed by intervals of

philosophical collapse, after which they found it difficult to rise again into the conceptions which fatigue made them let go out of their minds for a time. The history of these 'ups and downs' in one's private philosophical experience so far represents the history of mankind in their dealings with the philosophical problems. The work has to be done over and over again by the individual, after preceding results have been consigned to the very imperfect guardianship of language. Not so in the merely mechanical sciences, where one can build upon results already reached, without the discoverer, or the student of the discoveries, being obliged to re-think the whole from the beginning, in order consciously to comprehend its organic intellectual unity.

It is in this way too that the past history of man's attempts to think the universe philosophically has been really the history of a very few epoch-making minds, who have reached some insight into the real meaning of that life and world in which we find ourselves—an insight that is beyond the intellectual grasp of more than a few. The *monads* of Leibniz, conceived by him in their several gradations, may illustrate the different approximations of individual human minds to the Supreme Mind and Meaning. We have, at uncertain intervals, Parmenides, Plato, Aristotle, Plotinus, Augustine, Thomas of Aquino, Descartes, Spinoza, Locke, Leibniz, Berkeley, Hume, Kant, Hegel, followed by periods, each of thirty years or more perhaps, in which attempts are made to interpret and assimilate, or to controvert, the thought which *they* severally and successively originated, but with imperfect success,—by disciples and also by antagonists intellectually inferior to these masters. Then follows an interval either of sceptical despair, or of empirical eclecticism, or even of general indifference to every form of philosophical enterprise—until another genius arises to lead the way in a philosophy, unconsciously widened by preceding constructive and destructive endeavours, as well as by the ever accumulating experience gained in civilised life and in the empirical sciences. And so it has come about that man's philosophic outlook of the universe to-day is immensely in advance of that of Thales or Anaximander.

There is another way in which the Philosophical Development may be looked at. It is this:—Abstract speculations about the rational constitution of the universe, about matter and spirit, and about the capacity of a human understanding for comprehending what is present to it, are remote from the

experience of ordinary men, and thus seem to have no connexion with human interests and affairs. They are accordingly disregarded; for most persons do not even try to think consciously, far less to think out and solve, the problems to which the philosopher is awake. Men in this state of mind cannot see that such questions have any important influence upon human life. Nevertheless, their great (but chiefly unconscious) influence on mankind might be illustrated in the whole social, literary, political and above all in the religious history of mankind. A volume might be written in verification of the summary statement of Coleridge, that "all the epoch-making revolutions of the world,—the revolutions of religion, and with these the changes in the civil, social and domestic habits of the nations concerned,—have coincided with the rise and fall of metaphysical systems: so few are the minds that really govern society, and so imcomparably more numerous are the indirect or unconscious consequences of things than their foreseen and direct effects". It was thus that Hume's *Treatise on Human Nature* fell "still-born from the press": while his *History of England* charmed the readers of the generation in which he lived. To-day his *History* is an anachronism, superseded by more scientific conceptions of historical research,; but the philosophy of the *Treatise* and of the *Inquiry concerning Human Understanding* is diffused through the intellectual atmosphere of the age, and is the vital root of its agnostic speculation. Philosophy, in the form of abstract discussion, is passed by with indifference. It is recognised in its power only after it has, unconsciously to themselves, rightly or erroneously, transformed men's ordinary conceptions and beliefs about the world of the senses and the ultimate interpretation of their experience.

II.—THE GENESIS OF THE COGNITION OF PHYSICAL REALITY.

By G. F. Stout.

§ 1. *Statement of the Problem.*—The world of physical fact is revealed to the individual mind in and through sense-perception. It is, throughout, a world of sensible things and processes, or of things and processes which can only be represented by the analogy of sense-given presentations. It comprises within it, as an integral part of itself, the content of all sense-perceptions. An error or illusion concerning physical fact is always found on analysis to consist in a wrong interpretation of what is directly presented in sense-experience, by which it is represented as having relations within the physical system inconsistent with the interconnexion of the parts of that system as a whole. It never consists in the presentation of a percept which finds no place whatever in the world of physical fact.

At the same time it belongs to the very essence of a physical fact that it should exist independently of its presentation to any individual consciousness. It may or may not come within the range of sense-perception. Whether it does so or not, makes no difference to it, but only to the percipient. The physical world, as it is represented by the individual to exist, is a world which only comes within the range of his sensible experience in a detached and fragmentary manner. He is compelled to represent the greater part of the total system of material things and processes as existing and happening apart from and independently of his perception, because he is compelled to represent them as existing and occurring in a connexion of time and circumstance in which they form no part of the content of his experience. In recognising the existence of a physical world, we recognise, as Mill says, that there are things " which exist when we are not thinking of them, which existed before we had ever thought of them, and would exist if we were annihilated ; and further that there exist things which we never saw touched or otherwise perceived and things which never have been perceived by man ". To this we must add, for the sake of completeness, that those fragmentary portions of the physical world which

are perceived by us are regarded as existing independently of our perception in just the same way as those which do not come within the range of it.

The problem with which I propose to deal is a purely psychological one. I propose to investigate the genesis of the presentation or representation of physical reality as above defined. All questions concerning the ultimate validity and import of the belief in such an "external world," I shall leave as far as possible untouched. My problem is simply this:—(1) Seeing that all we have cognisance of must, in the process of becoming known to us, come within the range of our private experience, how do we come to know, or believe that we know, sensible things and events which, as they appear to us to exist or occur, do not, in the time, place and circumstances of their existence or occurrence, fall within the sphere of our private experience? (2) How is it that sensible things or events, which, at the time when they exist or happen, actually come within the range of our private experience, are nevertheless presented as having existence in themselves independently of us and of our individual history? Let us, by way of preliminary, examine Mill's answer to these questions in his "Psychological Theory of the Belief in an External World".

§ 2. *Mill's Definition of Matter.*—"Matter may be defined —a Permanent Possibility of sensation." Does this definition really express the nature of the material world as it is presented to the individual consciousness? From our purely psychological standpoint this is the only question with which we need concern ourselves.

In the first place, let us examine more closely the precise meaning of the proposed definition. What are we to understand by "possibility," as the word is used by Mill. It has been most clearly pointed out by O'Hanlon that the term "possibility" in Mill's sense is precisely equivalent to the term "nothing". "A naked possibility is nothing," and Mill's possibilities are naked possibilities. The word *power* can only have an intelligible application when it "represents an incomplete assemblage of antecedent positive conditions, or perhaps a complete assemblage, but counteracted by some opposing circumstances". In this sense physical things are certainly possibilities of sensation, for they are positive conditions which suffice to produce sensation so soon as certain complementary conditions are fulfilled, *i.e.*, so soon as they enter into a certain relation with sentient organisms. This is a fact universally recognised by common sense as a

general characteristic of material things. But Mill did not and could not mean this when he defined matter as a "permanent possibility". Otherwise he would have committed a *circulus in definiendo* of the most inexcusable kind. His possibilities are, so long as they are not realised, nothing actual, *i.e.*, nothing at all. This is a view which may or may not be true; for our purpose it is sufficient to point out that it is diametrically opposed to the irresistible conviction of the ordinary mind. Mill's account of the material world may represent that world as it really is; but it certainly does not represent it as it normally appears to us. I think we have good reason for saying that it did not so appear even to Mill; for he speaks of changes taking place in the grouped possibilities and taking place in the same order of antecedence and consequence, "whether we are asleep or awake, present or absent". Now a change in a naked possibility is at the time when it is supposed to take place a change in nothing, and a change in nothing is no change at all. This could not be what Mill really meant, but only what he fancied himself to mean.

It may be urged with justice that this criticism applies rather to Mill's terminology than to the real import of his doctrine. The essence of his theory is that physical reality can be shown by analysis to consist in the fixity of the order in which actual sensations occur and in which possible sensations would occur if we actually experienced them. He himself identifies "permanent possibilities" with "guaranteed and certified possibilities," *i.e.*, with "*conditional* certainties". The "*conditions*" referred to must of course be themselves sensations. This view appears to me to involve a curious mixture of insight and of blindness. Fixity of order, unchangeable by our wish or will, is certainly involved in the conception of physical reality. But just as certainly this order is not identical with that in which actual sensations are presented and in which possible sensations would be presented. To know that my sensations come to me or would come to me in a certain order is to know a real fact, which, as known, does not depend for its existence on my knowing it. But it is a fact falling entirely within the sphere of my own sense-experience and having no meaning apart from its relation to my private history, actual or hypothetical. Even if I take into account the experience of other individuals, actual or hypothetical, the case is not essentially altered. The reference is still to mental, not to physical, reality.

Kant puts the same point in a different way when he

emphasises the difference between "objective judgments" and "judgments of perception". "The apprehension of the manifold in the phenomenal appearance of a house that stands before me is successive. The question then arises, whether the manifold of the house itself be successive, which of course no one would admit." Mill would, perhaps, say that reversible sequence is the same thing as coexistence. But Kant's whole point is that in this and similar cases the "reversible sequence" of sense-presentations is by no means identical with their coexistence. The reversible sequence of sense-presentations may imply a physical coexistence of the parts of the thing which we are exploring with eye or hand. But this only serves to exhibit in impressive contrast the distinction between the physical order and the actual or hypothetical order of sensations.

To sum up—Mill was wrong in his analysis of physical reality as it appears in ordinary experience. He saw that, as cognised, what is physically real is independent of our cognition of it; he saw that the order of our sensations, actual and hypothetical, possesses this kind of independence, remaining fixed quite apart from any remembrance, anticipation or desire on our part. He, therefore, maintained with reason that this order possessed all the characteristics of reality as distinguished from mere appearance. But he was wrong in assuming that it possessed the characteristics of physical reality. The grouping of sense-presentations, actual and hypothetical, is a grouping, not of physical facts, but of mental facts, as determined by the order of a certain set of physical processes, *i.e.*, the physiological conditions on which sensation depends.

§ 3. *Mechanism of Association inadequate for our purpose.*—We have to inquire by what psychological processes the individual percipient is constrained to represent sensible things and events as actually existing and happening in a connexion of time and circumstance in which they fall outside the limits of his sense-experience. When the problem is stated thus, the inadequacy of Mill's attempted solution of it becomes evident. The psychological instrument on which he relied was the association of ideas. In order to account for the belief in an external world, we have, according to him, only to take account of the "associations naturally and even necessarily generated by the regular order of our sensations and of our reminiscences of sensation". Now, it seems to me that Mill's conditions are not merely insufficient. If they were per-

fectly fulfilled, they would not only fail to generate the belief in an external world, but they would preclude the possibility of such a belief. If complete uniformity prevailed in our sense-experience, so that it should be always possible to attain any given perception by first passing through a series of others in a fixed order, beginning with those which follow constantly upon volition, I fail to see how, under such conditions, the *ordo ad universum* could ever become detached in consciousness from the *ordo ad nos*. We should, no doubt, as we have seen, be aware of some kind of reality. But we should not be aware of it as reality in contradistinction from illusion; nor should we be aware of it as distinctly mental or distinctly physical; for the difference between the physical and the mental would for our consciousness be non-existent. Uniformity in the connexion of the contents of sense-perception, together with the laws of association, seem, when taken alone, rather to hinder than to help us. There is, therefore, only one course open to us. We must take into account the irregularity as well as the regularity of our sense-experience, and the conflict as well as the association of presentations. We must show how we are constrained to posit a world transcending and comprehending our individual experience by the necessity of interpreting, and so removing, incoherence within our individual experience. In order to enforce and explain this view, it may be convenient first to give a brief account of the process of constructive interpretation by which the conflict of presentations brings about its own removal. It will be, of course, impossible to go into detail. I shall only attempt to give an outline of the process as it may be supposed to take place in a typical instance of moderate complexity.

§ 4. *Process of Constructive Interpretation.*[1]—It may happen, and constantly does happen, that psychological conditions come simultaneously into play which tend to bring contrary contents of consciousness into the same relation with the same content. By the law of association, a given distribution of attention tends to be renewed as a whole when it is renewed in part. In other words, a content which has once been presented in consciousness as a partial constituent of a complex tends to reinstate this complex whenever it is itself reinstated. But the same content may have been

[1] Dr. Theodore Lipps has in his *Grundthatsachen des Seelenlebens* given a very careful and able analysis of this process. I have in part followed him very closely.

presented in different contexts—*i.e.*, it may have been presented in the same relation to contrary elements, so that, when it recurs in consciousness, it will tend to reinstate these contrary elements as in the same relation to itself. If, now, the reproductive nisus which tends to revive one of this pair of contraries be a sufficiently strong one, and if that which tends to revive the other be approximately equal in strength, there is a pause in the flow of ideas, and the mental state called suspense or perplexity ensues. Similarly, the context of a presentation as supplied by preformed association may be in conflict with its context as given in sense-perception. In both cases the mind is compelled to stop and consider.

A most important source of conflict is to be found in those variations in our experience which *primâ facie* appear to violate some law, mode or limit of variation with which we have become familiar. Supposing that on repeating the series 1, 2, 3, 4, 5, 6, I suddenly take a leap, and say 1, 2, 3, 4, 5, 6, 10, this violation of the rule of progression with which I started would awaken in anyone who happened to be attending at all closely a certain sense of discrepancy and a pause in the flow of his ideas. He would probably exclaim, 'Why do you say 10?' Now, the conflict in that case would lie not between the presentation of 6 and that of 10, but between the continuation of the series according to the law of the series and the actual continuation. Most trains of changes in sensible objects do not perhaps obey such definite laws as mathematical series. Nevertheless, there is for the most part a certain continuity in the variations to which they are subject. Conflict ensues whenever a transition is impressively presented which is strikingly sudden and abrupt as judged by the standard of our previous experience of the nature and limits of variation familiar to us in the subject of change.

Let us now examine the process by which the conflict of presentations brings about or tends to bring about its own removal. The first and chief point to be emphasised is that conflict operates in a manner exactly contrary to association. By the law of association the flow of ideas passes from *a* to *b* and from *b* to *c* in the order in which *a*, *b* and *c* have been previously attended to. Now it is the very nature of conflict to suspend this onward movement. In so far as a conflict of presentations arises, attention tends to move in conflicting directions, and the opposed tendencies neutralise each other more or less completely. When I speak of conflicting directions and opposed tendencies I

have a perfectly definite meaning. I mean that two presentations of contrary content tend to appear in consciousness in the same relation to an identical content, so that the different modes of mental activity counteract each other like physical forces having opposed directions and the same point of application. The forward flow of reproduction being in this manner obstructed, a peculiar redistribution of mental energy takes place, which cannot be accounted for on any principle of association. Like a stream which, meeting with obstruction, swells against its barriers and overflows its banks, the movement of attention, being suspended in its onward course, makes a way for itself in other directions. In the first moment of perplexity, attention is sometimes so diffused that no definite presentation emerges into consciousness. This state of general confusion tends also to recur at intervals during the process which precedes and introduces final cessation of conflict. But the general tendency of mental activity to become successively concentrated on the parts of a train of associated ideas soon reasserts itself. This ideal train cannot evolve itself from where conflict begins. The course of reproduction must, therefore, begin again from a new point of departure. Previous links in the train of associated ideas become revived, so that the movement of attention starts afresh from these and proceeds forward according to the laws of association. Now, if the result of this were that the same series a, b, c, always evolved itself anew in the same form to meet with the same obstacles so soon as it tended to pass beyond c, conflict might, *ceteris paribus*, persist for ever. But, except in a very primitive stage of mental development, this is not and cannot be the case. The flow of ideas in which b follows a and c follows b is not merely determined by the preformed associations between a and b and between b and c. It also depends on the total distribution of attention within the mental system. The redistribution caused by conflict must, therefore, largely modify the course of reproduction whenever it starts afresh from some backward link. When in this way a combination arises by which the conditions of conflict are removed, suspense ceases, and the flow of ideas proceeds without interruption. The modes in which this may take place are manifold, and I am not confident that they can be brought under one formula. Perhaps, however, the most general way of explaining an inconsistency is by making a distinction. In other words, c, instead of suggesting x and y as in the same relation to itself, comes to suggest them in

different relations to itself. The distinction which is to remove the conditions of conflict must not itself introduce conflicting differences. The general condition on which its efficiency depends is that the differences or variations involved shall be connected with the repetition of the homogeneous in space and the persistence of the identical in time. The same presented content x may, as referred to different parts of space, stand in what, except for this spatial difference, would be the same relation to the mutually contrary contents, p, q, r. Similarly, the same presented content x may, as the persistent subject of change in time, stand in what, but for this time-difference, would be the same relation to contrary contents p, q, r. The variations which accompany space- and time-differences must, however, be of a kind, and be restricted within limits, with which we are familiar. The transition in time from xp to xq may be a familiar experience, whereas that from xp to xs is entirely unfamiliar. A conflict of presentations will, therefore, ensue, when x appears first under the modification p, and then without intermediate transitions under the modification s. Conflict of this kind would be removed by an ideal combination interposing between xp and xs the transitions from xp to xq, from xq to xr, and from xr to xs, each of which is separately familiar, though they may never have occurred in this combination in sense-experience. Conflict would also cease if some familiar form of progressive variation suggested itself, leading continuously from xp to xs.

As experience advances in range and complexity, this constructive process becomes less mechanical. The general lines on which certain classes of problems admit of solution become more or less definitely known, so that the mind can confront them with prevision and purpose. It thus ceases to be blindly determined by the mere *vis à tergo* arising from the conflict of presentations. The most important advance in this direction depends on that voluntary control of the flow of ideas, in which the nature of language, considered as a mental activity, may be said to consist, and which is called in a distinctive sense thought or intellection.

It is necessary to add that, in early stages of mental development, theoretical problems arise for the most part in close connexion with practical needs. Incoherences in experience cannot produce perplexity unless they engross attention with sufficient strength and persistency. This depends on the interest which they excite, and such interest for the comparatively undeveloped consciousness is mainly

of a practical kind. Thus the solution of theoretical problems is at the outset almost entirely subsidiary to the devising of means to ends.

I have perhaps analysed a familiar process with too great tediousness and formality. My excuse is that I wish to claim for it definite recognition as a fundamental process, distinct from association, playing an essential part in all mental development and especially, as I hope to show more at length, in the development of the belief in an external world. I shall now examine the special steps or moments in the process through which this belief arises.

§ 5. *Antithesis of Mental Activity and Passivity.*—Mental life consists in the progressive redistribution of mental activity or energy. Following Dr. Ward, I shall call this activity or energy *attention*. For further definition of the word I refer to his article in the *Encyc. Brit.* (xx. 41). The mode in which attention is distributed at any moment depends in part on the mode in which it was distributed in the moment immediately preceding, in part on the action of the physical stimulants of sensation. So far as the transference of attention is determined from within it takes place gradually, and continuously, and in a certain fixed order. In each moment of our ordinary waking life, some definite presentation is focused in consciousness. Apart from the interference of external conditions, this dominant presentation owes its salience to the interest which it excites; and it excites interest in us mainly in so far as we have some apprehension of its meaning and import. Now this apprehension of the meaning and import of a presentation can only consist in some apprehension of its connexion with other presentations. Since these are, *ex hypothesi*, not given in distinct consciousness, it follows that they must be specially intensified in sub-consciousness. Adopting a term from Mr. Spencer, we may call this sub-excited group of mental elements "nascent" presentations. This term is applicable to them because they are nearer the threshold of distinct consciousness than other constituents of the mental system—*i.e.*, to use Dr. Ward's nomenclature, other portions of the *totum objectivum*. Thus, the focused presentation, together with the nascent cluster of sub-conscious elements connected with it, engrosses attention to such a degree as to exclude from distinct consciousness all objects save the dominant one. Now, apart from operation of extraneous conditions, the redistribution of attention normally takes place in such a manner that the focused presentation A gradually and

continuously disappears and gives place to a nascent presentation B. I say *gradually* and *continuously*, because it is impossible to determine where B begins and A ends.[1] Detail after detail of A disappears as detail after detail of B emerges, in such wise that those aspects of A which are most directly connected with B are the last to vanish, and those aspects of B which are most indirectly connected with A are the last to become discernible. As A gives place to B the character of the nascent group of sub-excited ideas gradually changes, so that certain elements acquire in it, on account of their connexion with B, a relative intensity and efficacy which they did not possess, while A occupied the focus of consciousness. B then gives place to a nascent presentation C, C to D, and so on. Now, in all these changes, and in all the variations of them which we can trace, the transference of attention is orderly and continuous. It is transferred from A to E through the intermediate links *a*B, *b*C, *c*D, *d*E, where *a*, *b*, *c*, *d* stand for A, B, C and D respectively, when they have partially disappeared. If we take into account the operation of conflict, as described in § 4, the case is not essentially altered. Conflict does not interrupt the continuous transition from one distribution of attention to another, except in so far as it is a conflict between preformed associations and the content of sense-perception. Apart from this consideration, conflict is itself a phase of mental process arising out of and leading up to succeeding phases in a gradual and orderly manner.

But this orderly redistribution of mental activity, determined by interest and preformed associations, is perpetually modified and controlled by interfering conditions. The flow of ideas is always partially uniform and continuous, partially discontinuous and irregular. As I sit absorbed in study, I am rudely interrupted by the sounds from a barrel-organ in the street. In such a case the disturbance of the continuous flow of inward activity is violently impressive. But the antithesis is never wholly absent. Every phase of conscious existence is in its totality determined by the co-operation of internal and external conditions. Manifold physical excitations are perpetually affecting, and must perpetually affect, the senses. On the other hand, there can be no complete suspension of the flow of inward activity so long as there is any conscious life at all. As Dr. Ward says, the mind exists in being active.

[1] Taine, *On Intelligence*, bk. ii., c. 3.

Although this antithesis is always in some degree present in individual experience, it does not follow that it is always distinctly apprehended. In early stages of development it is blurred by the overpowering predominance of external over internal conditions. It becomes most marked when vehement desire or strong anticipation is suspended or thwarted, or when the attention is suddenly and forcibly diverted by obtrusive sensations from the direction prescribed to it by practical or theoretical interests.

In so far as the mind becomes in this manner definitely aware of the limitations and interruption of its own activity, it finds itself confronted by a problem, which it can solve only by reference to an activity other than its own. Change within consciousness is in part a continuation of previous change within consciousness, in part a disturbance interfering with this continuous process. This partial uniformity contrasted with partial absence of uniformity constitutes a fundamental and pervading incoherence within the sphere of individual experience, which can only be interpreted and so removed by positing an existence lying outside the sphere of the individual experience. Process within consciousness, in so far as it is not traceable to antecedent process within consciousness, must be traced to antecedent process, which, at the time when it is represented as taking place, *ex hypothesi*, did not form part of the content of consciousness.

This seems to me to be an indispensable moment in the development of the perception of physical reality. But it is only one step, although a most important one, towards the solution of the problem before us. The antithesis of mental activity and mental passivity, when it becomes sufficiently definite, enables and compels the individual to posit some agency separate from, and independent of, his own private experience. But the material world as presented to us is very much more than this. It is not merely a something which conditions individual experience from moment to moment. It is a system of definite phenomena, tangible, visible and audible. In order to account for its psychological genesis it is not enough to show how, and in what sense, we may and must become conscious of something as existing beyond consciousness. It is necessary to show how the contents of tactile, visual and other presentations in all their concrete variety come to be apprehended as existing independently of individual thought and perception.

Let us next consider how far it is possible to approach a solution of this problem by taking into account the experiences connected with motor activity as contrasted with what Dr. Bain calls "purely passive sensation".

§ 6. *Muscular Activity.*—"Any impression," says Dr. Bain, "that rouses muscular energy, and that varies with that energy, we call an outward impression. . . . The sum total of all the occasions for putting forth active energy, or for conceiving this as possible to be put forth, is our external world." This statement appears to me to be to a large extent true. I have to examine how and how far it is so.

I cannot agree with Dr. Bain in directly identifying consciousness of muscular activity with consciousness of physical reality. His teaching on this point seems to me to involve an obvious paradox, which he fails to explain or justify. He tells us in the most explicit manner that external existence is synonymous with the uniform dependence of our passive sensations upon our motor experiences. "Our belief in the externality of the causes of our sensations means that certain actions of ours will bring the sensations into play or modify them in a known manner." The context shows that Dr. Bain here means literally what he says, otherwise one might be tempted to suppose that he had written "externality" by mistake for "internality". I utterly fail to see how dependence on my own activity can mean the same as dependence on something other than myself. The series of motor presentations accompanying my bodily actions form a content of my personal experience which does not of itself include any reference to a reality separate from and independent of that experience. Dr. Bain maintains, with good reason, that if we "were subject to purely passive sensations—such sensations as warmth, odour, light—apart from any movement of any active member whatever, our recognition of the external world might be something very different to what we now experience". But it is equally true that if the nature and order of our passive sensations were throughout as entirely within our voluntary control as are the experiences immediately and constantly connected with the movement of our "active members," our recognition of the external world would be altogether different from what it is. There might conceivably have been so perfect a "uniformity of connexion between certain appearances and certain movements" that it would have been always possible to attain a certain experience by first passing through a series of others in a fixed order, beginning with those immediately sequent upon volition. Thus certain movements of the eye might have been uniformly followed by certain visual experiences, certain movements of the limbs by certain tactile experiences, and so forth. Under these conditions I

do not see how the order of physical facts could ever have become detached in consciousness from the order of personal history,—the 'objective judgment' from the 'judgment of perception'. The all-important point is the comcombination of partial uniformity with partial want of uniformity in the connexion of sensation and muscular activity. There thus arise incoherences in our experience which bring about their own removal by a process of constructive interpretation; and this constructive process plays a most important part in the development of the cognition of a material world.

The mode in which this takes place is in general as follows. Certain changes within the field of consciousness are uniformly attendant upon our own motor activity. Similar changes also take place of themselves apart from any action of ours. In order to make our experience self-consistent we are constrained to interpret the involuntary variations by the analogy of those which are initiated by ourselves. We are constrained to regard these variations as due to something not ourselves exercising a motor activity analogous to our own. The nature of this activity is represented differently according to the variety of cases in which we are driven to assume its presence. To enumerate and explain all these cases in their manifold diversity would be an endless task. I can only touch on a few important points by way of illustration.

Tactual and visual sensations change their local signs in a uniform manner with movements of the eye and of the limbs. They also sometimes change their local signs in a similar manner without any corresponding variation in the position of the sensitive surface. In this latter case we represent the variation as sequent on a motor process standing to it in the same relation as our own experience of muscular activity would have done if we had initiated it ourselves. This is made possible, or at any rate facilitated, by the experiences which accompany the mutual exploration of the various sensitive surfaces of our body by each other. The visual presentation of the hand changes its local sign as the eye is moved. It may also be made to change its local sign in the same way by a certain movement of the hand. We thus learn the equivalence of these two motor series as antecedents of this variation in the content of consciousness. Thus when a visual presentation changes its local sign apart from our initiative, we are easily led by analogy to refer the change to a motor activity equivalent to our own, just as in the case supposed the motor series

attendant on a certain movement of the hand is equivalent to that which accompanies a certain movement of the eye.

With the movement of the head or of the body as a whole in a certain direction the extensive magnitude of a visual image gradually increases or diminishes. Similar increase or diminution sometimes takes place without any such movement. We then interpret it by reference to a motor activity other than our own. Here, too, the process of interpretation is essentially facilitated by experience of what takes place within the limits of our own organism. The same increase in the visual magnitude of the hand accompanies both the act of lifting it up towards the eyes and that of bending the head towards it.

Such instances might be indefinitely multiplied. For our present purpose it is sufficient to refer to a group of cases of unique importance—those connected with the experiences which arise when, to use Dr. Ward's language, our movements are "definitely resisted or only possible through increased effort". The series of muscular and other sensations which accompany the movements of our limbs or of our body as a whole are very largely within our own control. But they are by no means entirely so; for though it nearly always lies within our power to begin to move in this or that direction, yet we cannot uniformly determine whether or not a movement in a given direction shall meet with obstruction giving rise to a sense of increased effort. Nor can we uniformly determine by what intensity of effort we shall be able to overcome such obstruction, or whether we shall be able to overcome it at all. This has been extremely well put by Thomas Brown. "The infant . . . repeats the volition which moves his arm fifty or one thousand times, and the same progress of feeling takes place during the muscular action. . . . At length he stretches out his arm again, and, instead of the accustomed progression, there arises, in the resistance of some object opposed to him, a feeling of a very different kind, which, if he persevere in his voluntary effort, increases gradually to severe pain, before he has half completed the usual progress. There is a difference, therefore, which we may without any absurdity suppose to astonish the little reasoner." I quite agree with Brown that there is no absurdity in this supposition. It would be a psychological absurdity to suppose anything else. The "little reasoner" needs not, however, remain in helpless astonishment. There is certainly an impressive incoherence in his experience. But in order to interpret and remove it, he has only to posit a something

other than himself as "making an effort, the counterpart of his own". He thus assimilates all cases of resisted effort to those of which he has constant and uniform experience when within the limits of his own organism the one limb resists the movement of another.

We saw in § 5 how the individual is constrained to posit some agency beyond the range of his own private experience. We have seen in the present section how the individual is led to represent this agency as exercising a multiplicity of special activities in the way of movement and resistance analogous to those which precede and accompany his own bodily actions. There thus arises a well-marked division between self and its modes on the one hand, and the not-self and its modes on the other. The not-self must, by the conditions of its psychological genesis, be presented from the outset as that which changes or remains unchanged independently of this or that mode of motor activity on the part of the percipient. Hence variations in the content of perception, if and so far as they are traced to the motor activity of the percipient, are presented as changes in the self, *i.e.*, in the body-complex,[1] not in the external object. In the midst of such variations this object may remain unchanged. For example, the increase or diminution in the extensive magnitude of the visual image, which takes place as we approach to or recede from the visible object, is regarded as a change in us rather than in it. Not the thing, but its appearance varies. Similarly, when through movements on our part we cease altogether to perceive an object, we are not on that account driven to represent it as no longer existing. This, however, is a point which requires separate discussion.

§ 8. *The connexion of Persistence with Resistance.*—Before proceeding to discuss the genesis of our belief in the persistence of sensible objects during the intervals of perception, we must investigate the mode in which objects are pre-

[1] By body-complex I mean the whole group of experiences due to the mutual exploration of the different parts of the organism, all motor and organic sensations, and finally, all desires, emotions and mental images, considered as vaguely localised within the body, and so sharing in a manner its changes of position. The body-complex, so understood, is identical with the self as presented to the relatively undeveloped consciousness. Perhaps it is the form in which the self normally appears to all save the philosophic and reflective consciousness. Wherever in this paper I use the word self, I use it in this sense.

sented as persisting at the time when they are actually perceived. In this connexion, the experience of definitely resisted effort is of fundamental importance. For in it objects are revealed as persisting independently of us and of our actions through an effort which is the counterpart of our own.

We have seen (§ 7 *ad fin.*) that, so far as certain modes of variation in the content of sense-perception are uniformly connected with certain modes of variation in the motor activity of the percipient, they are apprehended as changes in the body-complex, not as changes in any object distinct from the body-complex. We have seen that this necessarily follows from the very nature of the process by which the not-self comes to be presented. Thus the changing series of motor sensations which uniformly accompany the free movement of the limbs are not regarded as involving any other changes beyond those which are immediately experienced. It is otherwise with those modes of variation which require as their antecedent a sense of definitely resisted effort. For here there is implicated, besides the motor activity of the percipient, a correlative activity, which the percipient is constrained to represent as having formed, at the time and under the conditions of its occurrence, no part of the content of his experience. Any process, therefore, which involves this twofold activity cannot be wholly and exclusively connected with either of its factors. It may, however, be possible, and even necessary, for the conscious agent to distinguish within the total process certain aspects which are definitely traceable to the direction and degree of his own exertion, as contrasted with the corresponding action of the not-self, and *vice versâ*.

On examination, it becomes evident that this is so. So far as resisted effort is followed by change in the content of sense-perception, we are constrained to refer the change, as such, to our own exertion; on the other hand, so far as the change is only partial, *i.e.*, so far as the resisting thing persists unchanged, we are constrained to interpret its persistence as uniformly connected with the kind and degree of the counter-effort, which we represent as distinct from our own. The experience of resistance is also an experience of persistence; it is, moreover, an experience of a persistence which must be represented by us as independent of us and of our actions.

Alterations in the form, position, texture, &c., of the resisting object, as presented to sight, touch or other senses, in so far as they are consequent on muscular exer-

tion, are uniformly introduced by definitely correspondent variations in the complex sensation of muscular tension. Since this is a change in the experience of resisted effort, it must be interpreted as involving a corresponding change in the not-self. Further, the same intensity of muscular tension may be followed on various occasions by varying degrees of change in the character of the resistance encountered, and in the tactile, visual and other sensations with which this is uniformly connected. Sometimes the same amount of effort, which, in one case, initiates a great change, is, in another, followed by no change that is appreciable. How is such want of uniformity and consequent incoherence in our experience to be interpreted and removed? It is easy to show that this is possible only by reference to the varying degrees of counter-effort on the part of the not-self. When change does take place, it is found that increased change follows increased effort, and that decreased change follows decreased effort on our part. Where no change takes place in sequence on a certain degree of exertion, it is often found to follow upon an increase of muscular tension. The general tenor of experience shows in like manner that, when by effort we overcome resistance, our action *quâ* ours is exclusively the antecedent of change *quâ* change in the resisting object. It follows that the partial or complete constancy of the resisting object, in spite of our efforts, must be represented as uniformly connected in a strictly analogous way with the counter-effort of the not-self. This is, of course, facilitated by the experience of double tension accompanying the mutual pull or pressure of our limbs. In such cases we find that each limb is maintained in its own position only by an effort equal to that which would otherwise be followed by its displacement. Similarly, when we resist moving forces exerted by things external to the organism, we find that, in general, the more effort we make the smaller is the change which ensues in our own position. These experiences admit of easy transference by analogy to the persistence, in spite of our efforts, of external things which obstruct our movements.

Thus we may fairly claim to have shown that all resistance is resistance to change, and that, in the normal course of human experience, the individual percipient is constrained to apprehend it as such. The same experience which reveals the object of perception as persisting partly or wholly unchanged in spite of our efforts reveals it as persisting independently of us through an effort, which is the counterpart of our own.

§ 9. *Unchanged Persistence in the Intervals of Perception.*— How is it that we are constrained to represent the object of a recurrent sense-perception as remaining in existence during the time in which we do not perceive it. To quote Dr. Ward, how are we "prompted to resolve the discontinuous presentation of external things into a continuity of existence"? Hume, who has investigated this question with extraordinary subtlety and insight, lays stress on (1) the "constancy" and (2) the "coherence" of the recurrent appearances which we regard as interrupted presentations of one uninterrupted existence. By "constancy," he means invariableness in the nature and order of the parts of a complex percept on the several occasions of its recurrence. "My bed and table, my books and papers, present themselves in the same uniform manner, and change not upon account of any interruption in my seeing or perceiving them." By "coherence," he means a uniform mode of variation. "Constancy is not so perfect as not to admit of very considerable exceptions. Bodies often change their position and qualities. . . . But here 'tis observable that even in these changes they preserve a coherence, and have a regular dependence on each other. . . . When I return to my chamber after an hour's absence, I find not my fire in the same situation in which I left it. But then I am accustom'd, in other instances, to see a like alteration produced in a like time, whether I am present or absent, near or remote. This coherence, therefore, in their changes is one of the characteristics of external objects, as well as their constancy."

Following in the footsteps of Hume, I propose to consider separately those cases in which a percept is repeated without any impressive variation in the nature and connexion of its constituent parts. Dr. Ward points out that the mere fusion of a percept with the revived image of a previous percept would of itself lead only to intellectual identification without supplying any motive for "resolving two like things into the same thing". This is, of course, true. But it must be borne in mind, that identification implies distinction, and that in the only class of cases which can be considered relevant, this distinction must have reference to a time-difference. The first and second presentations of A must be definitely and impressively connected by temporal signs with separate parts of the successive series which constitutes the changing experience of the individual percipient. They must, therefore, be represented either as transient events in this series, or as enduring apart from the series in

the interval which is interposed between their successive appearances within the series. We have to show how it is that the mind is compelled to adopt the latter alternative.

In the light of the foregoing sections, this is an easy task. We have seen in § 6 that change in the content of sense-perception, so far as it uniformly depends on the free movement of our own bodies, is not represented as change in the not-self. Now the movements by which we turn aside or recede from an object, so as no longer to perceive it, are, in general, of this kind. The same is true of the movements by which we close and open our eyes. We must, therefore, be predisposed to regard the disappearance and reappearance of the objects of perception as events not in their history, but in ours. Moreover, in § 8, we saw how, in the experience of resisted effort, bodies are revealed as persisting independently of us and of our actions through an effort which is the counterpart of our own. It follows, from these considerations, that it is inconsistent with the nature of external things, as they appear in actual sense-perception, to represent them as coming to be, and ceasing to be, concomitantly with their sensible appearances. Such a supposition would render our whole experience incoherent.

Finally, we must take into account a point on which Dr. Ward lays great emphasis, *i.e.*, the continuous presentation of our own body-complex. "As we have existed—or, more exactly, as the body has been continuously presented—during the interval between two encounters with some recognised body, so this is regarded as having continuously existed during its absence from us." It is evident that the persistence of our own bodies must immensely help us in representing to ourselves the persistence of other things. In order, however, to realise the full force of this consideration, we must remember that the not-self, as every step of our previous investigation clearly evinces, is constructed on the analogy of the self—*i.e.*, of the body-complex. It is, and must be, represented as another self, or rather as a plurality of other selves. Hence there arises a powerful predisposition to represent it as persisting in the same way as we persist.

§ 10. *Connexion of the perception of Space with that of physical Persistence.*—Professor James and Dr. Ward have lately shown, with great force and clearness, how the vague presentation of extensive magnitude, which forms a universal and inseparable constituent of all our tactile and visual

experiences, comes to be presented as a system of definite positions connected and separated by definite distances. It seems to me that they have succeeded in explaining by this method the perception of extension, but not the intuition of space as the form of external experience in the Kantian sense. Let us first consider the case of tactile perception. While we are exploring with the hand the surface of a body external to the organism, the same persistent system of local signs receives from moment to moment a varying content of tactile sensation, and tactile sensations, which we continue for a time to experience, keep changing their local sign. The parts of the external object are, therefore, originally presented as successive phases in a temporal series, the permanent subject of these continuous changes being the system of local signs. Now what is it that irresistibly constrains the mind to pass from the presentation of succession to that of coexistence and to apprehend the successive tactile presentations as parts of a spatial whole? It seems to me that the presentation of spatial coexistence here depends on that of physical persistence. We are compelled to represent resisting bodies as persisting independently of us and of our actions. When, therefore, we explore an external body with the hand, we are constrained to represent the successively presented parts of the tangible and resisting surface as continuing to exist when we cease to perceive them, in the same manner as they continued to exist when we perceived them. It follows that they must be represented as coexisting parts of a spatial continuum. Suppose the movement of exploration arrested for an instant. Suppose that at that instant A, B, C are contents of tactile perception presented in definite spatial relations to each other, so that B is interposed between A and C, and runs continuously into both. Now let the hand continue to move so that A gradually ceases to be perceived and D gradually comes within the field of touch. D is now presented as coexisting with B and C in the same spatial continuum, C being intermediate between B and D. But A, though unperceived, is still represented as persisting in its definite spatial relation to B and C; it is, therefore, represented as in definite spatial relation to D.

This seems to me to be the essential part of the solution of the proposed problem. But there are other complementary conditions to be taken into account. The most important of these is the uniform dependence of the sequence of percepts upon our own movements. So often as we pass the hand along the surface of the object in a given direction

we have a series of tactile experiences in a given order; so often as we invert the movement we have the same series in the opposite order. Now we have seen that so far as change in the content of perception follows, and follows uniformly, upon definite modes of our own free motor activity, such change is referred to the self, and not to the not-self. There is, therefore, nothing to prompt us to interpret the succession in the presentation of the parts of the tangible object as implying that the parts thus successively apprehended are themselves successive. This is an important negative condition, which leaves us free to represent them as coexistent, but is not of itself a positive condition constraining us to represent them as coexistent. If it were, we should be forced to regard the reversible series of sounds produced by the movements of our organs of speech as coexistent instead of successive. The reason why this is not so, is that there is nothing in our direct experience of the sounds uttered which prompts us to represent them as persisting in the intervals of perception. They do not persist independently of us while we hear them. We are, therefore, in no way predisposed to regard them as persisting independently of us when we cease to hear them. I cannot agree with Dr. Bain and Mr. Herbert Spencer that the reversible sequence of percepts is the especial experience by which the relation of coexistence is disclosed. It is also essential for this that the percepts concerned be revealed to us while they are perceived as persisting independently of our actions through an effort which is the counterpart of our own.

What has been said with regard to successive exploration with the hand applies *mutatis mutandis* to successive exploration with the eye. Only in the latter case we must remember that the experience of visible extension is connected with the experience of physical resistance and persistence, only in so far as definite modes of visible extension are uniformly connected with definite modes of tangible extension. This seems to me to be the main reason why the visual perception of space must ultimately be referred to a "tactile base".[1]

§ 11. *Change in the Intervals of Perception.*—The combination of partial constancy with partial alteration in the recurrent

[1] The above remarks on the connexion of the perception of space with the perception of physical reality seem to agree in their main drift with a note by the Editor on the subject in MIND xiii. 418.

objects of sense-perception gives rise to an incoherence in experience which prompts its own removal by a process of constructive interpretation. Constancy, in Hume's sense, is of itself a condition which disposes the mind to identify A as the same persistent object on the several occasions of its recurrence. Partial alteration, if it be in any way impressive, is of itself a condition which obstructs the process of identification. This must be so, because the effort to represent the same content of consciousness as standing in the same relation to different contents is an effort which defeats itself. Thus, if we repeatedly encounter an external body, constant in form, size and texture, &c., which resists our utmost efforts to change it in these respects, we are *ceteris paribus* impelled to recognise it as the same persistent thing, having uninterrupted existence between the times of its successive appearance. But if the constancy of texture, form, size, &c., is on some occasion combined with an altered position relatively to surrounding objects, conflict of presentations must ensue, and it must continue, except in so far as we are able to explain the difference by representing change as taking place in the intervals of perception analogous to, and continuous with, changes actually presented in our direct perceptual experience of resisting and persistent objects. The simplest possible case is that in which an alteration can be seen to be involved in the mere persistence of a certain mode of change, which, in an earlier stage, came directly within the range of sense-perception. By a persistent change I mean a change in which one phase continuously succeeds another according to uniform and recognisable rule, mode or limit of progression. Thus, a body moving constantly in a given direction persists in a certain definite mode of change. Now if a body so moving be at one moment perceived, at another disappears, and again reappears, in order to account for the difference in its position in its twofold appearance, we have only to represent the movement as persisting during the interval in which it was not perceived.

Apart from the need for accounting for the difference in position, we are predisposed to assume the uninterrupted continuance of a movement when we cease to perceive it, because the same experience of resisted effort which reveals to us the independent persistence of external things in like manner reveals the independent persistence of change in external things. All that has been said in § 8 applies *mutatis mutandis*, whether we suppose the initial state of the resisting object to be one of rest or of movement. Variation

in the velocity or direction of movement of the resisting body is as such uniformly dependent on the mode and degree of our effort; conversely, the degree in which the velocity or direction of the movement persists unchanged, in spite of a given amount of effort on our part, is uniformly connected with the degree of counter-effort which we ascribe to the not-self. Thus, the same condition which leads us to regard external things as retaining independently of us their form, texture, &c., leads us also to regard them as in like manner independent of us in respect to their local movements and other modes of variation uniformly connected with local movement.

Further complications are introduced when, in order to account for altered position, we have to represent a body not merely as continuing in a uniform mode of movement, but as having its course modified by obstacles. For the mental construction required in such cases, we have abundant material in our own experience of resisted effort transferred by analogy to the mutual resistance of external bodies.

Where the altered position cannot be traced to a movement which in some earlier stage has actually been presented, the object must be represented as beginning to move in the interval between its successive appearances. The commencement of the movement may be represented either on the analogy of our own bodily actions, which have their antecedent in voluntary activity, or it may be referred to the impact of some other body, acting as we do when we move external things. In both cases we interpret the change as in some manner a continuation of previous process according to a more or less definite law of progression. The history of physical science shows how the latter mode of interpretation has gradually supplanted and superseded the former, so that at the present day there seems to be no room for any view of nature save the mechanical one, which is extended so as to apply even to the actions of animated organisms. In early stages of development, on the contrary, not only the movements of animated organisms, but also the movements of bodies which we now regard as inanimate, were traced to the voluntary or quasi-voluntary initiation of personal or quasi-personal agents.

It would be both tedious and useless to go into further detail on this subject. The essential point is that through such constructive processes there grows up within the individual mind the representation of a system of definite

things and processes, existing independently of its fragmentary and discontinuous appearances in the sensible experience of any individual percipient or of all taken collectively.

§ 12. *Conclusion.*—I hope that now my main position is clear. The physical world as presented to us is a fixed system of related elements. It includes within it the content of all our sense-perceptions; it also includes within it much which, in the connexion of time, place and circumstance to which it is referred, lies outside the sphere of our individual experience. It is, moreover, a system which exists for us independently of our wish and will, and to a great extent contrary to our wish and will. We have been concerned with the question: By what process does such a system come to be presented to the individual consciousness? The plain man refers us for an answer to our senses. Agreeing with the plain man on this point, we inquire further, by what process sense-perception gives rise to the belief in an external world. The answer, so far as we have been able to discover, is, in broad outline, as follows:—Partial uniformity combined with partial want of uniformity in the connexion of the contents of sense-perception gives rise to incoherence in our experience, which causes conflict of presentations. This conflict constrains us to make our experience consistent by a constructive process. In this constructive process we are compelled to connect sense-given presentations with each other by means of ideal combinations. In this manner we are constrained to represent things and processes as existing and happening in a connexion of time, place and circumstance in which they fall outside the limits of our individual experience. The coherent system which thus comes to be presented has all the characteristics of physical reality. Our point of contact with it is in sense-perception. It comprises within it the content of all sense-perceptions. Every special connexion of elements within it forces itself upon us with a strength derived from its being an integral part of the whole fabric of related elements. Hence the stubbornness of facts is in great part to be accounted for. Of this total system it is only a small fragment with which we as individuals are brought into direct contact, and even this fragment, inasmuch as it is an integral part of the whole, shares the independence and self-existence of the whole.

III.—DOUBLE CONSCIOUSNESS IN HEALTH.

By Alfred Binet.

I.

I have published lately, in different serials,[1] the result of my researches on a question, of great interest for psychology, which I have studied on hysterical 'subjects'. This question is that of the duplication of consciousness. It has seemed to me useful to try if I could obtain analogous results in 'subjects' that are normal—or nearly so, for, of course, the normal type has only an ideal existence. It is certain that, if we succeed in seizing in a healthy individual the least degree of the phenomena of duplication which are so developed in the hysterical, a solid basis will be given to the psychological study of double consciousness; each observer being put in a position to check all the facts advanced. I have made my investigations on five persons, who have been kind enough to submit themselves patiently to very long, very minute and very monotonous experiments. Before setting forth the results obtained, I will give a summary of the experiments I first made on hysterical 'subjects'.

These experiments bear on the movements that can be provoked in the insensible limb of a hysterical 'subject' without the 'subject's' knowledge. If, at the risk of making hypotheses, I offer, in brief outline, a theory of these phenomena, I shall be clearer than if I began with a summary of the facts. In my opinion, things pass in the anæsthetic hysterical 'subject' as if there existed a particular group of states of consciousness in special relation with the insensible regions of the body. This particular mental synthesis is quite distinct from the general synthesis that forms the personality of the subject; it forms as it were a smaller personality beside the greater, which is ignorant of it,—a second Ego beside the first. This smaller personality in the first place receives tactile, muscular and other

[1] "Recherches sur la Physiologie des Mouvements chez les Hystériques," en collaboration avec M. Féré, *Archives de Physiologie*, Oct., 1887; "Recherches sur les Altérations de la Conscience chez les Hystériques," *Revue Philosophique*, Février, 1889; "Note sur l'Anesthésie hystérique," *Comptes Rendus de l'Académie des Sciences*, Janv., 1889; also in the *Bulletins de la Société de Biologie*, and in *The Open Court* (*passim*).

impressions, painless and painful, proceeding from the insensible regions; it can apprehend these impressions, and execute in consequence adaptive movements; it can likewise respond by adaptive movements to ideas belonging to the first or main personality, and thus serve for the involuntary expression of these ideas; finally, it can in its turn excite ideas in the field of the main personality. In all these circumstances, so different among themselves, the smaller synthesis remains distinct and independent, and the principal Ego of the 'subject' in no wise has consciousness of it. There is a double consciousness, or, if we prefer to put it in that way, a coexistence of two conscious thoughts that are ignorant of each other.[1]

I will now summarise the facts that form the support of the theory that has just been indicated. These facts have all been observed under the same conditions, namely:—the 'subject' of the experiment was always a hysterical patient, presenting complete insensibility in some part of the body, for example, the arm or the hand; and further, the insensible part was withdrawn from sight by the interposition of a screen, in such a manner that, during the experiment, the 'subject' was aware of neither the sensations nor the movements. When a hysterical 'subject' presents such insensibility, it is observed in many cases—not in all—that the reflex actions and movements provoked in the insensible limb are exaggerated in comparison with those in the limbs that retain their sensibility. If a known object, such as a pair of scissors or a pencil, is placed between the fingers of the insensible hand, the fingers and the hand perform an act of adaptation in relation with the nature of the object; for example, if the pencil has been placed between the thumb and the index finger, these two fingers approach the pencil, the others bend, and the hand assumes the attitude necessary for writing. If we fix the insensible limb in any position, sustaining it a little, it happens not rarely that the limb keeps this position, and sometimes for a very long time, without the 'subject's' feeling fatigue, and further, the limb does not sink when charged with light weights. If a passive movement be communicated to the limb, it may repeat it, even when it is a very delicate and complex movement,—a graphic movement, for example; and the repetition of the written word

[1] Without giving the history of this question, I may remind the reader that it has been studied in France by M. Pierre Janet, and in England by Gurney and Mr. F. W. H. Myers.

may even take place with signs of intelligence : thus when, by guiding the insensible hand, we have made the ' subject ' write a word, it sometimes happens that the hand corrects an error in spelling, or finishes the word of which we have traced only the first letters. If letters and any kind of signs be traced on the insensible skin, while the hand holds a pencil, the hand may reproduce all these signs which the 'subject' does not perceive. If the 'subject' be made to listen attentively to the sound of a metronome while the insensible hand holds the pencil, we see the pencil follow the rhythm of the metronome; but this registering of the rhythm ceases or becomes much less marked when the 'subject' is requested not to listen to the sound of the instrument. When the insensible hand is made to undergo a very strong excitation, it may come to pass that the hand makes movements of defence, as if a pain was felt, although the ' subject ' experiences nothing ; for example, if the fingers of this hand be made to hold a lighted match, we sometimes see the fingers recoil and fly from the flame. When the ' subject ' thinks intently of something, for example, of a figure, and when the insensible hand holds a pencil, the pencil traces the figure, and thus occasionally reveals to us the intimate thought of the 'subject,' without his knowledge; inversely, it may often happen that if we produce a determinate number of excitations on the insensible hand, for example, by pricking it or moving one of its fingers to and fro, and at the same time request the ' subject ' to think of a number, the number he voluntarily, and in appearance freely, chooses is that of the unfelt excitations. Finally,—the last, perhaps the most interesting, and without doubt the rarest, observation,—it happens sometimes that, when the insensible hand holds a pencil, it begins spontaneously to write connected sentences, without the ' subject's ' being able to account for it.

These are the principal facts which I have had occasion to observe in researches lasting through several years. They give evidence, as I have said, of the existence in the hysterical ' subject ' of two centres of activity, which may remain absolutely distinct. Many experimental details, notably the last observation which we have just summarised, prove that these two activities may be conscious, and that consequently there may be in hysterical ' subjects ' two simultaneous and distinct consciousnesses.

Is it the same in non-hysterical ' subjects ' ? That is the question which the present paper will try to answer.

II.

The persons on whom I have experimented are two ladies of fifty, a lady of thirty and two of twenty-five years of age. One lady of fifty is ataxical; the lady of thirty is decidedly anæmic; otherwise, all of them enjoy good health. They have little intellectual culture, are completely ignorant of the aim of the experiments, and know, of course, nothing of researches on double consciousness or the like. I sat with each of them, on an average, six times, for three-quarters of an hour. The phenomena became gradually more marked, and without doubt would become still more so if the treatment were pushed farther. Lately, I have attended to the question whether suggestible persons present a narrowing of the field of consciousness, that is to say, a difficulty in occupying themselves with several things at a time.[1] I think I may answer that it is not so with those of my 'subjects' who present the most developed automatic phenomena; in fact, they can do at the same time very complicated things, for example, perform a mental addition, and squeeze, in series of five or six pressures, an indiarubber tube connected with a registering apparatus. I shall return to this question later on.

A word, first of all, on the experimental conditions selected. When experiments are made on a hysterical 'subject' with an insensitive limb, it is relatively easy to submit that limb to excitations of which the 'subject' has no consciousness. If, for example, it is the arm of the subject that is insensible, this is placed behind a screen, the skin is excited without the 'subject's' perceiving the excitation, and the movements—often very intelligent—which the hand and the forearm execute in response to that excitation are produced outside the consciousness of the 'subject,' and prove consequently that there exists in the 'subject' a second consciousness.

But when the 'subject' of the experiments has not the least insensibility, it is necessary to change the method. If his hand, placed behind the screen, is touched, he feels that it is touched, and the movement by which he responds to this sensation is equally conscious; there is no double consciousness there. To evoke double consciousness, it is therefore necessary to render the 'subject' insensible to the excitations brought to bear upon his limb, and, for that

[1] Pierre Janet, *L'Automatisme psychologique*, p. 456.

purpose, to distract him by occupying him otherwise ; distraction, as M. Pierre Janet has well shown, being a transitory anæsthesia.

I therefore requested my subjects—to whom, of course, no explanation was given of what was going to be done—to seat themselves before a table and leave their right hands to me, while I gave them something interesting to read. In these conditions one fact first showed itself which is worthy of remark. If the hand of one of my 'subjects' was pricked while she was reading attentively, the sensation was less well perceived than when the 'subject,' without looking at her hand, was told that she was going to be pricked and was prepared to receive the sensation ; for example, the separation necessary for the two points of a compass to be felt as double was greater in the first case. This, then, is anæsthesia by distraction ; it is fugitive, passing, deceptive,—but it exists.

I could render it stronger by means of an artifice. Provoking different movements in the limb experimented on, I requested the 'subject' to execute no movement, to leave her hand, for example, completely motionless and relaxed, and at the same time made her believe that it was I who, by slight pushes on the pencil or on the hand, made the latter move. Thanks to this little deception, the subject would pay no attention to those slight movements of her hand, but attribute them to the experimenter. Evidently these (very delicate) psychological conditions will vary from one 'subject' to another ; but for the moment we need take no account of the variations.

III.

One of the experiments it appeared to me easiest to effect was that of the repetition of passive movements. A pencil being placed in the hand of the 'subject,' who was attentively reading a journal, I made the hand trace a uniform movement, choosing that which it executes with most facility, for example, shadings or curls or little dots. Having communicated these movements for some minutes, I left the hand to itself quite gently ; the hand continued the movement a little. After three or four experiments the repetition of the movement became more perfect, and, with Mlle. G——, for example, at the fourth sitting the repetition was so distinct that the hand traced as many as 80 curls without stopping.

It is for the experimenter to choose with each 'subject' the easiest kind of movement. I find that in general those

movements are easiest that can be executed with a continuous stroke.

In the first experiments, when the hand had been successfully habituated to repeating a certain kind of movement—for example, curls—it was to this kind of movement that it had a tendency to return. If it was made to trace the figure 1 a hundred times and was afterwards left to itself, the stroke of the figure became rapidly modified, and turned into a curl. This shows well how rudimentary, as yet, was the motor memory that was being developed.

When any kind of movement had been well repeated, it could be reproduced without solicitation every time a pen was put in the 'subject's' hand and she fixed her attention on reading. But if the 'subject' thought attentively of her hand, the movement stopped.

I have selected graphic movements because they are sufficiently delicate to be produced without awakening the attention of the 'subject,' whereas movements of flexion and extension impressed upon the fingers or the wrist would with difficulty pass unperceived at the beginning of the experiments.

Movements of flexion and extension can nevertheless be developed, and I have ascertained that it is easier to get a total movement of the wrist repeated automatically than an isolated movement of flexion of one of the fingers.

When these movements of repetition become very distinct, they may come to be generalised and to appear in the other limb.

A second observation relates to the influence which the contact of the experimenter exercises on the hand experimented on. With a slight pressure I was able to make the hand go obediently in all directions, carrying the pen with it. This is not a simple mechanical compulsion, for a very feeble and very short contact is sufficient to bring on a very long movement of the hand. The phenomenon, I believe, can be approximated to a rudimentary suggestion by the sense of touch. Nothing is more curious than to see the hand of a person who is awake and thinks she is in full possession of herself implicitly obey the experimenter's orders. In these conditions there appears to me to be a partial hypnotisation.

It sometimes happens that the 'subject' perceives these movements; but the perception is much less distinct than in the normal state. You can assure yourself of this by requesting the 'subject' to describe exactly the movement she has been made to execute.

IV.

The necessary condition for the preceding reactions is that attention should not be fixed on the hand and what is taking place there. So far, I have realised this condition by making the 'subject' attend to something else, *viz.*, reading, which is an intellectual operation having nothing in common with the excitations that produce manual movements. Thanks to this artifice, the excitations,—for example, the contact of the experimenter or the passive movement impressed,—produced their full and entire effect on the psycho-motor centres of the arm, without the attention and will of the 'subject' interfering to modify the reactions.

Curiously, this result can be attained by quite opposite means. Instead of the attention of the 'subject' being attracted elsewhere, it may be fixed on the particular excitations that are to set going the psycho-motor mechanism of the hand.

The following is the clearest example that I have been able to establish. Place a metronome before the 'subject' and set it in motion. Let the 'subject' be requested to listen with the greatest attention to the hard sharp sound of the metronome, while the hand holds a pen. Pretty rapidly you can habituate the hand of the 'subject' to trace with the pen little strokes that follow the rhythm of the metronome. Some persons even attain to doing it spontaneously.

In this experiment it is sufficient for the 'subject' to listen with attention to the sound in order to cease to perceive the movements produced in the hand by the acoustic excitation. The excitation and the movement are nevertheless cause and effect. They are two elements of the same psycho-motor process; and *a priori* it might have been thought that the attention fixed on one of these elements should naturally extend to those associated with it.

Excitation of the movements of the hand may be produced not only by external sensations, but by ideas that strongly occupy the mind of the 'subject'. If the 'subject' thinks forcibly of a name or of a figure while holding a pen in the hand, and if the experimenter himself holds the hand of the 'subject,' it happens pretty often that the hand executes movements distinct enough for the experimenter to be able to divine his 'subject's' thought. This is the phenomenon of automatic writing, which has been studied at length within the last years. I have nothing new to add, unless it be the remark that concentration of thought on a figure is sufficient to produce a state of distraction from the movements of the hand that is writing the figure.

The experiment with the metronome gives occasion for a remark as to the effect of attention on the intensity of sensations. As long as the subject listens to the beats of the metronome, the rhythmical movements of the hand go on. They become much feebler and may even cease completely if the subject is requested not to listen any longer, but to think of something else. This observation I had made on hysterical 'subjects,' and in much better conditions; for the rhythmic movements of the hysterical 'subject's' insensible limb are so considerable that they translate themselves, when the 'subject' holds an indiarubber tube, into pressures on the tube. I have therefore been able to register these movements by the graphic method; and the tracings obtained show that there is a great difference in the extent of the contractions, according as the 'subject' listens with attention to the sound of the metronome or tries not to hear it.

This experiment on the hysterical, taken along with that which has just been described on healthy subjects, proves, in my opinion, that there is in us a power of augmenting the intensity of an excitation whenever we attend to it. Attention is comparable to will; it is, in fact, nothing else than will directed towards the organs of the senses and the processes of ideation. Just as by the will we can stop a movement or augment its energy, so by attention we can weaken or augment the effect of a peripheral excitation. I reserve the study of attention for another time.

V.

My aim here was simply to show that the rudiment of those states of double consciousness which I have studied first in the hysterical, may with a little attention be found in normal 'subjects'. This result might have been inferred from the numerous observations on automatic writing which have been made on 'subjects' free from hysteria. Automatic writing is the best known of these facts of double consciousness; but we have seen that it is not isolated. It is only one in a large class of phenomena, others being the repetition of communicated movements, suggestion by contact, insensibility by distraction, &c. All these phenomena, when brought together, throw light on one another and attest the formation of a centre of consciousness functioning independently of the common centre. My experiments appear to me to demonstrate that many normal 'subjects,' if not all, are apt to have their psycho-motor centres thus disaggregated.

Of course my experiments were not complicated enough to prove that the psycho-motor centres of the hand and arm, which I have caused to act independently, are accompanied by states of consciousness. I have therefore not succeeded in demonstrating double consciousness in healthy as in hysterical ' subjects '. I have only established the existence of the first degree of the phenomenon.

Of the five ' subjects ' specially studied, I have only found one — a lady of fifty — who, in spite of repeated experiments, displayed neither automatic writing, nor suggestion of the hand by contact, nor automatic repetition of movements. The only fact observed with this lady is that, when she reads while holding a pen in the position necessary for writing, her right hand insensibly traces with the pen a straight line from left to right. I must add that she declares herself almost incapable of attentively following her reading while experiments are being made on her hand ; her attention, in spite of every effort, goes with curiosity to her hand and spies out all that is taking place there.

The four other persons who submitted themselves to my researches displayed the phenomena of double consciousness. In two these phenomena were rudimentary ; in the two others they were very developed. According to their own evidence, these four ' subjects ' can fix their attention on their reading with sufficient force not to feel anything that is taking place in their hand.

It seemed to me then that attention was an important condition of the success of my researches. Accordingly, I made the following experiment on my two best ' subjects '.

I studied first the repetition of passive movements whilst reading was occupying their attention otherwise. The repetition was very distinct and developed. It might continue more than a minute without the knowledge of the ' subject '. If, for example, the pencil held in the hand had been made to trace a series of curls, the hand went on of itself to trace as many as a hundred more.

I now requested the ' subject ' to leave off her reading, to close her eyes, and to think with all possible attention of what was taking place in her hand. In these new conditions the repetition of passive movements appeared to diminish. When I asked the ' subject ' to look attentively at her hand while it was being made to trace curls, the movement stopped before it had well begun. The stoppage was here caused by the attention of the ' subject,' by her will ; in short, by all the elements of her personality.

This is not all. I requested the same ' subject ' to resume

her reading, and began again to impress movements on her hand. Under the influence of this mental distraction, the repetition of the movement reappeared; but it was much less distinct than before. The experiments had somehow instructed the 'subject,' and it is probable that, in spite of the attention she gave to her reading, she watched her hand and prevented the movements from taking place.

At this point I thought of an experiment which has thrown light on the very delicate mechanism of these psycho-motor reactions. Instead of occupying the 'subject' with easy reading, I put before her a long addition-sum, and required her to do it without the smallest mistake. What I had foreseen happened; repetition of the movements communicated to the hand began again, with a distinctness and a persistency which it did not possess during the reading.

This experiment gave me the key to the problem I was trying to solve. I think I may sum up my last result thus: the state of voluntary distraction produced in the 'subject' by the more exacting operation of addition prevents the consciousness, the attention and the will from inhibiting the movements of the hand.

A conclusion like this will perhaps, for a superficial reader, have the appearance of a truism, and I should be very glad if it appeared absolutely commonplace. But, when examined with care, the facts are seen to be very curious and significant. The experiments just described consist essentially in evoking two psycho-physiological processes which have nothing in common, such as reading on one side and repetition of a manual movement on the other. In the persons experimented on, the second of these processes was accomplished better when accompanied by the first. The automatic movements of the hand were only distinct when the 'subject' was at the same time reading or adding up figures.

This is not like our common experience. In most cases the mind cannot do two different pieces of work at once without one of them suffering, and sometimes both. I have been able to establish this as it were *de visu* in experiments I have been following out for some time on the conflict of states of consciousness. The procedure I have employed—which I shall describe at greater length elsewhere—consists in making a person squeeze an india-rubber tube rhythmically, while reading, or adding up mentally, or the like. The indiarubber tube is connected with a registering apparatus, and the pressures of the hand translate themselves into a tracing of which the slightest

irregularities can be detected. Now this tracing is frequently irregular in the parts that coincide with the reading or addition; and the irregularities are the more marked the more difficult and complicated the mental labour which the 'subject' is asked to perform.

This result, compared with that which I obtained in my experiments on automatic movements, is soon shown to be its inverse, and apparently its contradictory. The more the 'subject' is distracted (by reading, mental calculation, &c.) the more irregular become the *voluntary* movements of the hand transmitted to the indiarubber tube; and, if the distraction is very intense, these movements may cease completely. On the contrary, the more distracted the 'subject' is, the more regular and considerable become the *automatic* movements of the hand. The contrast is quite striking.

I am in no haste to generalise these results. I only state what took place in my 'subjects'.

The explanation of the difference observed between the conditions of voluntary movement and those of automatic movement, however, appears to me a comparatively easy matter. When a person is asked to do two things at a time—to read a book, for example, and to execute some manual task—two motor impulses are evoked which start from the same personality, from the same focus of consciousness. For it is the same person that is charged to do the two things at once,—to divide his attention and will between the two things. This coexistence of the two operations must evidently make each separately less perfect. The more attention each exacts because of its complexity, the more both will have to suffer from being carried on together.

On the contrary, when an automatic action is evoked in one of the limbs by a stratagem—when the hand is forced, for example, to execute certain movements without consciousness—it is not the conscious personality of the 'subject' that is appealed to. His conscious personality would only interfere in the experiment to inhibit the movement. This inhibition we avoid by turning away his attention; and, if there is no inhibition when the person is distracted, it is for the same reason that makes him unable to voluntarily squeeze the tube with regularity when he is distracted.

Schematising these complex relations of states of consciousness, I arrive at the following result. In the case where a person performs at once a mental addition and a muscular act, let the first operation be called *a* and the

second *b*. Observation shows that each of them is prejudicial to the other, tends to inhibit it. Let the automatic activity of the hand be called *c*. There is in each 'subject' a power to perceive this activity and to suppress it by holding the hand motionless. Let this operation be called *b*. The operation *b* then can inhibit *c*. But occupation of the 'subject' with reading, by provoking the operation *a*, prevents him from inhibiting the movements of his hand; that is to say, *a* is permitted to inhibit *b*, and this prevents *b* from inhibiting *c*. There is here, to use a happy expression of M. Brown-Séquard, *inhibition of a cause of inhibition*.

I wait for a future opportunity of following up this interesting line of study. If I make known my first results, it is because they bear on almost normal 'subjects,' and because, consequently, every one can, with a little attention and patience, check all that I advance. Perhaps the results will be different for different persons.

However that may be, the observations I have just related may contribute to show the rather embarrassing complexity of those inhibitory actions which psychologists have only begun to study within the last years.

IV.—ON SOME CURRENT CONCEPTIONS OF THE TERM 'SELF'.

By Professor JOHN DEWEY.

I.

IT is the aim of this paper to analyse certain conceptions involved in the terms Self and Self-consciousness as currently used. No attempt will be made to judge of the value of the ideas themselves. Indeed, there is such confusion in the use of the conceptions that an independent analysis of them would seem to be a necessary preliminary to any decision upon their validity. Whether or not philosophy is exhausted in the clearing-up of conceptions, it is certain that without an occasional clearing-up philosophy will get so entangled in the *impedimenta* of its own notions as to be hindered in its onward march. Unless this analysis is confined to ideas having or claiming to have some community of meaning, it will include ideas wholly incomparable with one another, and thus end in a mere account of the way in which various writers use the same word. A study of the terminology of philosophy is, no doubt, helpful; but, as that is not intended in this paper, I shall confine my analysis to the conception of the 'transcendental self'—to the idea of self which has affiliations with the movement set going by Kant, however divergent its various developments.

For a starting-point, and to a certain extent for a basis, Prof. Seth's recent work, *Hegelianism and Personality*, presents itself as convenient, occupied, as it so largely is, with just this notion of the self. In that work, three separate conceptions—used, however, interchangeably—may be discriminated. In the first place, we have it laid down that "the self *is* the world, and the world is the self. The self and the world are only two sides of the same reality: they are the same intelligible world looked at from two opposite points of view. . . . The mind and the world, subject and object, are convertible terms; we may talk indifferently of the one or the other: the content of our notion remains the same in both cases" (pp. 19-20). This result is based upon an examination of Kant's transcendental inquiry and method which is, so far as quoted above, accepted, to all appearances, by Prof. Seth. The

meaning of this view of the self may stand out more plainly if we call attention to another feature of it. This is that the "ultimate fact of knowledge is neither pure subject nor pure object" (p. 13). These are both abstractions: to separate them, to make independent existences of them, is to "substantiate abstractions". In truth, the self is a synthetic unity. "It binds together, as related members of one whole, what would otherwise fall apart as unrelated particulars; and, moreover, it is only through this synthesis that the unity of the Self or Ego exists. It is the unity *of* the synthesis, and, apart from its synthetic activity, would no more be real than the particulars of sense would be real without its action." It cannot be identified, in other words, with the mere act of uniting: it includes within itself what is united, just as, on the other hand, what is united has no existence outside of its being united. Because this is so—because, as Prof. Seth expresses it (p. 19), "the form is the form *of* the matter, and the matter is, as it were, simply the exhibition of the form"—the self and the world are correlative, and have the same content.

This, then, is the first notion conveyed by the term self—the self is the correlative of the intelligible world. Its content is that of the intelligible world. It even *is* the intelligible world in one of its aspects. And since Prof. Seth has expounded with great force the notion that the intelligible world is the only real world, that the unknowable to intelligence is "nonsense" (*Scottish Philosophy*, p. 162), we may say that, according to this notion, the self is one with the real world, when this is considered in its ultimate unity. This view is clear and self-consistent; with its truth we have nothing to do. But we find that the question as to the nature of the transcendental self has not been sufficiently answered. The question is again raised: What is the transcendental self? (top of p. 22). And the question is answered in a way which seems to me the exact opposite of the answer just given. It now turns out that the transcendental Ego represents *merely* the *formal* unity of the universe (p. 27). Although the self was shown to be a single self, its singularity is simply that which belongs to every abstract notion—a logical identity of type (p. 29). It is the "notion of knowledge in general" (p. 30). And, finally, Kant's characterisations of it are quoted. It is "a merely logical qualitative unity of self-consciousness in thought generally". It is a "logical exposition of thought in general" (p. 35). It is, finally, the "mere form of self-consciousness in general" (p. 230).

I confess that, to me, this second position, that the self is merely the formal unity of thought, appears to be the contrary of the first position taken by Prof. Seth. There the self was not formal; the form was an abstraction apart from matter. Kant was then rebuked for making the self formal. The necessity of correlating matter and form was the fundamental feature of the transcendental method. So far was the self from being merely formal that it was the world. Instead of being merely logical, the self was the unified universe; it was a synthetic unity which had no existence apart from the particulars unified in the synthesis. But in this second and revised view, Kant is praised for his superior consistency in holding that the self arrived at by his investigation is an abstract condition and not a metaphysical reality or concrete fact (p. 28). The subject which "exists only as the unity of the manifold whose central principle of connexion it is" (p. 17) becomes transformed in ten short pages into a "*focus imaginarius* into which the multiple relations which constitute the intelligible world return"—a "*principle* of unity". To cut short this comparison of contradictory statements, the language first used regarding the self conveys, as clearly as language can convey anything, that the self is objective and real, is ontological; while the second view taken is that the self is merely formal and logical. The first view is that the self and the real cannot be separated without "substantiating abstractions"; the second view is that to unite them is to "hypostatise an abstraction" (p. 30).

But, as we advance further, it appears that the outcome of the transcendental view of the self is not in reality either that the self is the real world, or that the self is a mere logical form or abstract unity of thought. The view which finally emerges is that self is the "ultimate category of thought" (p. 98). So far as the varying expressions permit us to judge, this is Prof. Seth's real thought in the matter. It is, at least, the view which is unambiguously reiterated in his 'Discussion' in MIND xiv. 117. It is stated once in connexion with passages which have been quoted as belonging to the first interpretation: "The transcendental self, as an implicate of all experience, is for a theory of knowledge simply the necessary point of view from which the universe can be unified, that is, from which it becomes a universe" (p. 20). It is elsewhere stated that the transcendental theory of knowledge resolves itself into an immanent criticism of categories, or of the conceptions by which we express and unify our experience. This criticism shows that self-consciousness is the highest category—the most adequate to

determine existence. We are thus "justified in using the conception of self-consciousness as our best key to the ultimate nature of existence as a whole" (p. 89). In fine, "self-consciousness is the ultimate category of thought—that through which we think everything else, and through which alone the universe is intelligible to us".

I cannot persuade myself that this third conception of self-consciousness is identical with either of the other two. It means less than the first, which identifies the self with the world; it means more than the second, which makes self-consciousness a merely formal or abstract unity of thought. For it must be remembered that Kant would no more have accepted self-consciousness as the ultimate category of experience, or as a category of experience at all, than he would have accepted it as identical with the real world. In fact, the various expressions which Prof. Seth has quoted with approval from Kant are directed as much against making self-consciousness a category of experience as against making it a real self-existent being. How can the "poorest of all our ideas" be the richest and most comprehensive principle of philosophic explanation? The very reason for holding that the self is merely a logical unity of thought is that the self cannot be employed to determine experience at all. But perhaps it may be said that it was just the result of the Hegelian development of the Kantian method and presuppositions to demonstrate that the self, instead of being the emptiest of categories, a conception the sole use of which is to show that all our thoughts are accompanied by consciousness, is the organic system, the reality of all categories. I am not in the least concerned to deny such a contention. But this contention only shows the inadequacy of defining the self as a "merely logical qualitative unity of self-consciousness in thought generally," and not that it is consistent to unite such a view with a view that the self is our ultimate principle of verifying and explaining experience. Indeed, the purpose of Kant in calling the self merely logical was to oppose it to experience; but, when it is said from the point of view of the Hegelian development of Kant that the self is the highest logical category, the idea conveyed is that of the complete correlativity of thought in general, and this thought in particular, to experience. When Kant speaks of a logical unity of thought he means that thought is formal, not real; Hegel in speaking of a logical unity means that thought is real and not formal. The relation between thought and knowledge is not at all the

same in the two cases. With Hegel, to say that self is the highest type of thought is to say that self-consciousness is the ultimate principle of knowledge. The object of Kant is to show that the self, since merely a principle of *thought*, is not a principle of *knowledge* at all. While both therefore might call the self "the logical exposition of thought in general," the phrase would have absolutely opposed meanings in the case of the two writers.

No relation of opposition exists between the transcendental self as equal to the real world and as equal to the ultimate category—between, that is, the first interpretation and the third which Prof. Seth gives. But although not opposed, they are not the same. To pass directly from the one to the other *would* be to hypostatise an abstraction. The transition may be justifiable, but it cannot, of course, be assumed without justification. The transcendental self may be the highest thought of the world, but it cannot be said to be the correlative of the world, unless the content of the world can be shown to be exhausted in thinking it—or unless the transcendental self is more than a principle of thought. Because thought is objective, it does not follow that it is all there is of objectivity. The world as thought — and thus brought under the principle of self-consciousness — may be real as far as it goes, and yet not be identical with the world as known—with the whole meaning of the real world. The known world may be, for example, a world thought and felt, and not thought alone. Thus while self-consciousness — if it equalled only the ultimate category of thinking—would be an adequate determination of the world as thought, it would, after all, be only a partial determination of the whole as it really exists, and could not thus be called, as Prof. Seth at first calls it, a term convertible with the world and having the same content.

These may appear distinctions so notorious that it is trifling to spend so much time upon them; but the fact that so experienced a writer as Prof. Seth has presented all three interpretations as explications of the meaning of the "transcendental self" is my excuse for dwelling upon them. There is a certain kinship, indeed, between the three interpretations which would render it easy to pass unwittingly from one to another. The idea of the self as the ultimate category of philosophic explanation stands between the other two. Its content is logical, or thought; and thus when one is arguing against a writer who seems to transform this category into an existence by itself, it is easy to go

to the extent of saying that it is *merely* logical, and approve an author who held to the view that it was wholly abstract, even though that author meant by that expression that self was not a category of explanation at all. But, on the other hand, having in mind the fact that self-consciousness is a notion for explaining the world in a sense in which mere 'being' or 'quantity' or 'mechanism' is not,—that it exhausts the meaning of the universe as an object of thought,—it is easy to go to the other extreme, and hold that self-consciousness *is* the intelligible world seen from one of its sides. But none the less the conception of self as merely formal and abstract contradicts the other two conceptions; and these other two, while not mutually incompatible, are so far from being identical with each other that to pass from one to the other without more ado is to "erect an abstraction into a concrete existence".

II.

As the object of this paper is not to convict Prof. Seth of either verbal or real inconsistencies, but to help to clear up certain ambiguities in the current use of the conception of 'transcendental self' (these ambiguities finding an unusually clear expression, as it were, in Prof. Seth's book), I wish now to pass to the historical origin of these various meanings, chiefly as found in Kant, incidentally in Hegel as related to Kant.

Kant's theory is brought out in his 'Transcendental Deduction'. This is so familiar that it may be given summarily. Its gist, in the second edition of the *K. d.r. V.*, is the proof that the identity of self-consciousness involves the synthesis of the manifold of feelings through rules or principles which render this manifold objective, and that, therefore, the analytic identity of self-consciousness involves an objective synthetic unity of consciousness. That self-consciousness is identical is, in itself, a merely analytic proposition. It means nothing more than that I am I—that what *I* am conscious of is in *my* consciousness, and that what belongs to your consciousness I am not conscious of. It finds its empirical application in the fact that, unless the consciousness which has ideas to-day is identical with that which was conscious yesterday or a year ago, it can no more now be conscious of what it was conscious of then than it can now be conscious of what is in your consciousness. But this does not prove the existence of any real self or substantial mind. It is still an analytic proposition and means that the same consciousness is the same consciousness. But if we

ask how we know this sameness or identity of consciousness, the barren principle becomes wonderfully fruitful. For we do not know this sameness through the various successive ideas; they are not the same, but *ex hypothesi* various. And, furthermore, instead of knowledge of the identity of self depending upon them, I should not know them even as various, unless they were already mine. The identity of self-consciousness cannot be derived from knowledge of them, for this knowledge presupposes that identity. But perhaps we may go behind the apparent variety and disparateness of our ideas, and say that one consciousness *accompanies* all these different ideas, and that knowledge of this common element is the knowledge we are in search of. This does not suffice. The mere fact that consciousness accompanies every idea gives no identity unless these ideas are already conceived as *mine*—unless identity is presupposed. Otherwise, I should "have as various and many-coloured a self as I have different ideas". If we say that the *common* element gives us that knowledge of the identity of self which we are in search for, we doubly beg the question. A common element means an identity present in the midst of difference, and thus presupposes the sameness of consciousness through different ideas; and knowledge of this common element could be attained only if it were possible to compare many and various ideas in *one* consciousness, and thus see that they had a common element. These methods of knowing the sameness of consciousness thus presuppose what they would account for.

The sole way of accounting for this analytic identity of consciousness is through the activity of consciousness in connecting or "putting together" the manifold of sense. Since this putting together occurs according to fixed rules and principles, it is an objective synthesis. Knowledge of the identity of self presupposes, therefore, a self which acts synthetically, regularly so, upon sense-material. "The original and necessary consciousness of the identity of one's self is, at the same time, a consciousness of the equally necessary unity of the synthesis of all phenomena according to conceptions. . . . The mind would never conceive the identity of itself in the manifoldness of its ideas, if it did not perceive the *identity of the action by which it subjects this manifoldness to unity.*"

The 'Deduction' in the first edition, instead of beginning with the consciousness of self-identity, begins with the consciousness of objects, and asks what is involved in that. The answer is the same. Consciousness of objectivity

means unity of self-consciousness, and this not a formal or analytic activity, but one which connects the manifold of sense according to rules or conceptions. Whether, then, we inquire what is involved in mere sameness of consciousness, or what is involved in an objective world, we get the same answer: a consciousness which is not formal or analytic, but which is synthetic of sense, and which acts universally (according to principles) in this synthesis.

Apparently we have here a conception of the transcendental self like the first one laid down by Prof. Seth. This self, since its existence is its synthetic activity upon the particular manifold of sense, is thoroughly objective. It has precisely the same content as the real world. And the objective world, since it turns out to be the synthesis of particulars of sense through the action of self according to conceptions, is subjective; it has the same content as the transcendental self. It is the transcendental self looked at as 'there,' as a product, instead of as an activity or process.

The next step in the analysis is to see why Kant, after having attained to the conception of an objective self, should shift his ground. Kant, in reaching this result, or in his transcendental deduction, has proceeded as if the synthetic action of self and the manifold of sense were wholly constituted through their mutual relations to each other—as if each had no existence excepting as a factor in the self, or in the world, determined by the other. The conceptions exist only as synthetic activity upon the manifold of sense; the manifold of sense exists only as connected by these conceptions. But while Kant has chosen in the deduction to consider them as mutually related to each other, they have a meaning entirely apart from this mutual qualification, which, having been abstracted from in the transcendental deduction, must now be brought in that we may see how it affects the result.

The final meaning of the manifold of sense is found, not in its relation to the synthetic notions of the understanding, but in its relation to a thing-in-itself which produces it. In order to be known by us, this manifold must, indeed, be subjected to synthesis, and enter into relation to the self. But it has its own being entirely apart from such qualification. And, on the other hand, the conceptions of the understanding are not exhaustively determined by their synthetic action upon sense. They have a nature of their own, entirely independent of this synthetic action. The transcendental deduction does not give us, therefore, an analysis of the self, or of knowledge, or of the world as

such; but simply of the conditions under which a manifold of sense (having a nature outside its relations to self) is knowable by us, or of the conditions under which conceptions of the understanding become categories of experience, these conceptions having their real and essential meaning, all the while, in a purely logical character which belongs to them apart from knowledge or experience. The transcendental self is thus a name for the incident under which our knowledge occurs, instead of giving the analysis of knowledge itself. It cannot be identified, therefore, as at first it seemed it might be, with either the real object (the thing-in-itself) or with the real subject. Just as the synthetic principles of experience are in themselves logical forms of analytic thought, so the self, in its own nature, is known only as the bare unity of these logical forms, the simple 'I think' that must accompany all thought. The introduction of the thing-in-itself, therefore, leads Kant to that view of the self which finally gets expression in the quotations which were made in connexion with Prof. Seth's second idea of the self. For it must be remembered that the introduction of the thing-in-itself into Kant's philosophy affects all the factors which enter into his account of knowledge—the nature of thought as well as the nature of sensation. It is not an excrescence which can be lopped off without reconstruction of the whole theory of knowledge. Do away with the thing-in-itself, and the conceptions, instead of being *merely* logical, are also real, for their whole existence and meaning will then be found in their synthetic relation to the sense-manifold. And the transcendental self, instead of denoting a "logical exposition of thought in general," marks the synthetic union of the logical with the manifold of sense through regular principles of activity—marks, therefore, the objective character of the self. For if we reconstruct the Kantian theory of knowledge upon its own basis and method of analysis, doing away with the thing-in-itself, the result is to show that the *merely* logical, equally with the *merely* ontological, is an impossible abstraction. The *merely* logical is not at all; the logical *is* only as the thought-factor in the entire determination of experience, requiring another factor in order to constitute the self. That Kant's position of the merely formal abstract character of the self is superior in consistency to that of some Neo-Kantians is, therefore, not so evident as is the inconsistency of the restatement of such a position by one who denies the whole notion of the thing-in-itself.

But even if we correct Kant's analysis by doing away with

the thing-in-itself, retaining all features not inconsistent with it, can the result of the transcendental deduction stand without further interpretation? Admitting that the removal of the thing-in-itself would show the transcendental self not as a logical abstraction, but real as experience itself—more real, indeed, in the sense that the reality of experience is shown by analysis to involve the reality of this self, behind which we cannot go—would this removal give a self whose content was the same as the content of the known world? The answer must be in the negative. The known world is constituted by the manifold of sensation, as connected by the self through its principles of synthesis. The content of the world, as known, will not be equivalent to the whole significance of the self, therefore, unless sensation is capable of being connected by principles of synthesis which manifest the entire nature of the self. But the position of Kant (a position entirely independent of any notion of *Ding-an-sich*) is, that sensation is incapable of being so determined as to equal self-consciousness; or, if we put it from the other side, that self-consciousness, even as a real activity of synthesis, can never exhaust all its synthetic capacities upon a material of sense. Sense is, as it were, inadequate to the relations which constitute self-consciousness, and thus there must also remain a surplusage in the self, not entering into the make-up of the known world. The reason for this is, that all the manifold of sense must be determined by certain forms of perception, space and time, before being determinable by the categories of thinking. Perhaps it would be more in accordance with the Kantian spirit to say that sensation, since it is in relation to space and time, must always present itself to the synthetic action of self as a manifold of mutually external particulars. The conceptions are thus not capable of determining sensation independently, but only as sensation is already subject to time- and space-*cadres*. Every category, therefore, must receive its value from its application to sensations already a manifold of external particulars, and the result can be only the system of objects in time and space. No category of experience can be found, accordingly, higher than that which determines most exhaustively the relations of objects and events in time and space, *viz.*, reciprocity. And, correspondingly, no object can be known which is not an object in space and time. Hence the impossibility of making the self an object, since it is the condition of all objects, through its synthetic action upon sense. Stated in more Kantian language, the result would be that self-consciousness is the unconditioned, while experi-

ence, owing to the necessary relation of the synthetic activity of self to a material already determined as externally limiting and limited, can never present an unconditioned.[1] There thus remains a distinction between self and experience, due not now to the shadow thrown on knowledge by the thing-in-itself, but by the incompatibility of sensation, as rendered a manifold of external particulars in space and time, to the unconditioned content of self-consciousness. Experience can never be complete enough to have a content equal to that of self-consciousness, for experience can never escape its limitation through space and time. Self-consciousness is real, and not merely logical; it is the ground of the reality of experience; it is wider than experience, and yet is unknown except so far as it is reflected through its own determinations in experience,—this is the result of our analysis of Kant, the *Ding-an-sich* being eliminated but the Kantian method and all presuppositions not involved in the notion of the *Ding-an-sich* being retained. The resulting conception of the self is, evidently, not equivalent to either of Prof. Seth's two first definitions of the self. It is not a mere abstract and formal logical unity, for it involves the action of thought upon sense, and is thus synthetic and objective; and yet it is not one side of the world of experience. The world of experience is constituted by it, but the world of experience does not exhaust it.

We have next to consider the relation of this revised Kantian conception of self to the third notion of self stated in Prof. Seth's book—the idea of self-consciousness as the highest category of thought and of explanation. So far we have dealt only with the general idea of thinking as synthesis of sense according to principles. The different forms of synthesis, or the categories, we have not dealt with. Kant, as is well known, had twelve of them, which he derived without

[1] I do not mean to imply that I regard Kant as teaching that objects are first given as objects in space and time, and that the action of thought follows upon the presentation of such ready-made objects; or that there can be perception without conception. On the contrary, I think that Kant teaches very distinctly that space and time (and, of course, with them everything in space and time) do not exist as perceived objects without the action of thought. But he also holds that the manifold of sense which thought synthesises has already a formal element which determines it to relations of externality. The fact that thought never connects pure sensations as such, but only sensations partially determined by relations of perceptivity, would occupy much the same place now occupied by the notion of schematism in Kant's theory, if this theory were reconstructed merely on the basis of the elimination of the *Ding-an-sich*.

further examination from certain notions which he found to be involved in the formally logical theory of judgment. It was the work of Hegel, first, to give an *independent* derivation of them, as contrasted with Kant's taking them for granted; secondly, to give an *organic* derivation of them, in placing them in relation to one another, as contrasted with the simple juxtaposition of them which is found in Kant; and, thirdly, to show the category of self-consciousness as their basis and system, instead of stopping short with reciprocity, and placing the categories in opposition to self-consciousness. Now, accepting Hegel's work so far as it thus relates to the categories, and accepting his criticisms upon the Kantian procedure in reference to them, let us again revise the Kantian results in view of Hegel's position. Will this give us the self as the supreme category of experience? The answer must be in the negative. In one way the Kantian conception will include more than the Hegelian; in another way, less. It includes more, because what Kant offers is not primarily the self as a category of explanation at all, but the self as the real ground (not, however, to be confused with cause) of experience.[1] It includes less, because, however ready Kant might be to admit the Hegelian criticism and derivation of the categories as superior to his own, he could not admit that self-consciousness may be used as a category of experience. Self-consciousness would still have the function of the Idea for Kant. It would be an ideal regulative of experience, not a category constitutive of it.

Considering first this latter point, we may say that, admitting Kant's derivation of the categories from the forms of syllogistic logic to be insufficient and artificial, granting that it is impossible to stop short with the category of reciprocity, it does not follow that the category of self-consciousness is a category of experience. The distinction between conceptions of *thought* and conceptions of *knowledge* still remains. The reason for this we have already seen. It is the peculiar relation of the categories to sense as qualified by the forms of space and time. While, therefore, we might have the thought of self-consciousness, and while as a thought it would not be empty but would be, in another sense from that in which Kant actually uses the term, the vehicle of all notions of thought—their organism, it would be impossible to use this category so as to determine sense by it. For it is impossible

[1] It will be understood that we are now speaking of Kant as revised by the elimination of the *Ding-an-sich*.

as long as we retain Kant's fundamental presupposition—the idea of the partial determination of sensation by relation to perception, apart from its relation to conception—to employ self-consciousness as a principle of explaining any fact of experience. Every fact of experience is capable of adequate explanation without any such category; or, conversely put, experience can never convey anything adequate to the notion of self. Self-consciousness would thus be an ideal category—that is to say, it would suggest the notion of a possible experience, unlike anything that *we* can possibly experience. It would be a notion which should regulate the successive organisation of our present experience by pointing to a goal that yet we never could reach, and which should also point out the limitation of our present experience.[1]

The reconstruction of the Kantian theory of categories in the light of the Hegelian logic would give the following points. First, it would derive the conceptions from a common root and place them in some organic connexion with one another. Secondly, it would place the Notion of the understanding and the Idea of reason in some connexion with each other. The reason, with its Ideas, would not then appear, as it does now, an accidental afterthought of Kant, or an arbitrary derivation from the theory of the syllogism. The conception included under the Idea would follow by immanent development and criticism from what are now called Notions of the understanding, and would follow as their basis in thought. The distinction between them would be between conceptions that may be used to connect sensations subject to space- and time-forms and those that may not be so used. Thirdly, the ideas of organism and teleology, which also now appear to be unconnected with the rest of the Kantian philosophy, sprung upon us without intrinsic necessity, would form part of the content of the Idea as distinguished from the Notion. And, finally, the distinction Kant now makes between theoretical and practical reason, between the fact which is and the ideal which ought to be, would get an organic connexion with the rest of the philosophy. This gives the outline of a reconstruction of his ethics; for it would appear that it is just the business of moral experience to overcome that distinction between experience and self-consciousness which theoretical know-

[1] The distinction would thus be analogous to, perhaps identical with, the distinction Kant draws between our intelligence, in which the immediate and the mediate element never wholly coincide, and an intelligence which may be described either as Intuitive Reason or a Rational Intuition.

ledge cannot remove. All this we can get, if we read Kant with the eyes of Hegel; but self-consciousness as an actual category of our scientific experience we cannot get unless we simply substitute Hegel for Kant.

But it is time to turn to the other point: that the transcendental self of Kant is more than self-consciousness as a supreme category of explanation. It is more, because the self of Kant (the self as it would be with the *Ding-an-sich* eliminated) is more than any category: it is a real activity or being. And it cannot be said to be more than a category only because he has hypostatised a category—that if he had understood himself he would have seen that it was just a category. There is a fundamental distinction between the Kantian critique of pure reason and the Hegelian theory of categories which makes their results disparate. Kant's object is not the examination of *thought*, but the examination of *knowledge;* and his method is not a consideration of the significance, placing, relative adequacy and inadequacy of the conceptions or aspects of thought with a view to discovering the entire meaning of thought; his method is an analysis of the *actual* factors which actually constitute knowledge. One of these factors is thought, and, therefore, the complete carrying out of the method would undoubtedly involve an examination of thought as specified into its various conceptions. But because the Hegelian *Logic* is the development of one factor in Kant, it will hardly do to say that the purpose of the Kantian *Critique* is exhausted in the purpose of Hegel's *Logic*. At least, if we do say it, it should be with the distinct consciousness that we are not completing Kant, but are abandoning the characteristic feature of his undertaking and of his method. This is, I repeat, not an immanent "criticism of categories" but an analysis of experience into its aspects and really constituent elements. And in the course of this analysis Kant comes upon a self which through various principles of synthesis puts together the manifold of sense and, thereby, constitutes experience. This, indeed, is not a theory of creation; it is not an attempt to tell how a self set to work, or by necessity would set to work, to make a universe. But because it is not a theory of creation, it does not follow that it is only a criticism of categories. The assumption that there is no middle ground between a theory of creation and a mere analysis of forms of objective thought is, to say the least, a curious one. Kant's method is the analysis of the known universe or of experience; and as a result it discovers a self acting through thought upon sensation. Thought as synthetic is action

upon sense, and sense is through the synthetic action of thought. If we call them factors of experience it must be with the recognition of their intrinsic unity with each other. The self constitutes this unity; it is the activity which is the source of the correlative synthesis of thought and sense. That analysis of reality should give anything but reality would be a strange result. And the reality found by the Kantian method through analysis of reality is a self which through thought is synthetic of sense determined to be a manifold of limiting particulars by relation to space and time.

There are two strains in Kant: one is inquiry into the necessary thought or logical conditions of experience; the other is the inquiry into the actual nature of experience. The *Logic* of Hegel undoubtedly works out the former to its consistent results. The latter it does not come in contact with. The former inquiry asks what are the forms or principles by which we must think the world; or, from the other side, what the world must be, as thought. The answer is that to think the world in its completeness is to think it as self-consciousness. Now this proposition is, as I attempted to show in the earlier portion of this article, not convertible with the proposition that the world *is* self-consciousness, unless it is also shown that the world is only and just as it is for thought. But the result of Kant's inquiry into the *actual* nature of experience is to show (to his satisfaction, I mean, the *truth* of the results not being under examination) that it includes another element besides thought, namely, feeling, and that on account of this element—or at least on account of its peculiar relation to forms of perception—the world as experienced can never equal the world as thought. That is, while to *think* the world completely is to think it as self-consciousness, it is the very characteristic of experience or *knowledge* that it cannot be complete—and hence cannot give self-consciousness.

We have thus another conception of self-consciousness to put beside the three obtained from the analysis of Prof. Seth. This is the conception which we reach in reconstructing Kant by means of the elimination of the *Ding-an-sich*, and by that more complete working-out of the logical side of his analysis of experience which was made by Hegel. This is the self as the activity of synthesis upon sense. Starting from this notion the other three notions may be at once placed with reference to it. The self as the *merely* logical or abstract unity of thought falls away entirely. Self-consciousness as a category of experience becomes changed

into an ideal which serves at once to organise and to reveal the incompleteness of experience. Where (as in ethics) the ideal *is* the reality, self-consciousness is again a real category of experience—but of practical experience, not of theoretical. The self which could use the category of self as a category of both practical and theoretic experience would be a self whose content was the same as that of the world. "The self and the world are only two sides of the same reality" in this case. While from the standpoint of Hegel's *Logic* (I am not speaking of the rest of his philosophy) such a result could be reached only by substantiating a category, from the standpoint of Kant's *Critique* it would be reached as an analysis of the reality of experience—if it were reached at all. But it can be reached only as an ideal which serves by contrast to manifest the incompleteness of experience as it presents itself to us.

It is evident that we are now upon the verge of another difficulty. As long as sensation was regarded as given by a thing-in-itself, it was possible to form a conception of the self which did not identify it with the world. But when sense is regarded as having meaning only because it is 'there' as determined by thought, just as thought is 'there' only as determining sense, it would seem either that the self is just their synthetic unity (thus equalling the world) or that it must be thrust back of experience, and become a thing-in-itself. The activity of the self can hardly be a third something distinct from thought and from sense, and it cannot be their synthetic union. What, then, is it? This is, I take it, the problem which finally emerges, when Kant is made self-consistent by the elimination of the thing-in-itself, and when the logical or thought-factor of his philosophy is developed in the Hegelian manner. It is precisely, as it seems to me, the difficulty which comes to the front in Green's reconstruction of Kant. It is to meet this difficulty that he frames the idea of a completely realised self making an animal organism the vehicle of its own reproduction in time. The conditions of the problem are: a denial of the *Ding-an-sich;* the analysis of knowledge into thought, and feeling which is ἕτερον to thought; the recognition that this feeling, after all, exists only as determined by thought; and the belief that feeling enters into *our* knowledge only under conditions of space and time, although space and time, in themselves, are feeling determined by thought. No space remains to consider how far Green's conception of an eternal self communicating itself gradually through physical conditions, and thereby constituting a human self, meets

the demands of the problem. But it is evident that, when the problem is conceived as just stated, the self cannot be thought of as equivalent, on the one hand, to the world, because this world, as knowable by us, is always subject to certain forms, namely, space and time, which condition sense; nor, on the other hand, as equivalent to the highest category of thought, because the self is more than thought, more than a category, namely, the activity of synthesis of sense through thought. It is, I think, this twofold character of time and space, as at once forms of knowledge conditioned by the self, and yet conditioning self as it works in us, that is the genesis of Green's notion. The truth of the conditions upon which it rests—that is, Kant read in the light of Hegel so far as is necessary to make Kant consistent—is not under examination here; but if we grant it, the theory of Green is a genuine attempt to meet a genuine problem, and not a mere hypostasis of an abstraction.

V.—SOME PROPOSED REFORMS IN COMMON LOGIC.

By Christine Ladd Franklin.

The whole field of Deductive Logic, even when thought of merely in the terms of common language, has acquired, for the student of Symbolic Logic, a symmetry and a completeness and a simplicity which it is, apparently, far from possessing in the minds of its usual exponents. The natural repugnance which the ordinary logician felt, at first, to seeing processes of deductive reasoning made the subject of a great development by a purely mechanical process, has in great part passed away; it would have been hard for it to survive the eloquent persuasiveness of Mr. Venn's *Symbolic Logic*. It seems, therefore, to be time for the simplified ways of looking at things which prevail in Symbolic Logic to begin to sink into the elementary expositions of the subject. The simple reforms which I am about to propose in the present paper have nothing in the world to do with Symbolic Logic; but they will, nevertheless, be most likely to commend themselves to one who has been in the habit of moving in the orderly region to which that discipline has reduced the field of Thought.

I.

On the Naming of Related Propositions.

It need hardly be stated that the object in giving a name to a group of things is to furnish the mind with an artificial contrivance by which it can, mechanically, call up to consciousness the properties which those things have in common, and which mark them out from other things to which the name is not applied. That system of naming is best which sets forth, in itself, the greatest possible number of resemblances and differences; which is such, in other words, that, when the names of which it is composed have once been learned, as little as possible remembering of relations is left to be done by the mind by main force. A subsidiary requirement, but one which it is not too much to say should always be met, is that the same thing, if it is a subject for consideration in several different branches of learning, should receive the same name in all. There is a set of words which the logician uses—'obverse,' 'converse,' 'reciprocal,' 'contrapositive,' 'inverse,' &c.—which do not meet either of these requirements. 'Obverse' has been adopted by the Society for the Improvement of Geometrical Teaching for a different

proposition from that to which it is usually applied in Logic, and the school-boy who learns in one class-room that 'Non-A is non-B' is the obverse of 'All A is B,' has to painfully bear in mind that its obverse is 'A is not non-B' when he enters another. Nor is there any consensus among logicians themselves as to the use of these names. I propose to show that a new set of names, not very different from those now in use, would enable one to set forth the affinities of the things named in a way that is not even aimed at at present.

'All x is y' and 'No non-y is x' are propositions which stand to each other in a certain relation. In what terms we shall describe that relation can only be decided after we have fixed upon our definition of proposition. But there are two definitions in common use, and the proposition is a totally different *thing* according as one or the other of them is adopted. According to one, a proposition is "a portion of discourse in which a predicate is affirmed or denied of a subject"; according to the other, "*every portion of knowledge conveyed in language*, everything propounded for belief or disbelief," is a proposition. But by the latter definition, the two statements just made about x and y are *one and the same proposition*. As statements of fact, as descriptions of the universe in terms of x and y, they are identical; each has the effect simply to deny the existence of the combination $x\bar{y}$. But they do not affirm or deny the same predicate of the same subject, and hence, in the other sense of proposition, they are not the same. I conceive that the latter, that is, the material, sense of the word is the more useful and convenient, and that it is better to say that

'All x is non-y,'
'All y is non-x,'
'No x is y,'
'There is no x which is y,'
'There is no y which is x,'
'The combination xy does not exist,'
'Everything is either non-x or y,'
'Everything is either y or non-x,'
'There is nothing but non-x and y,'
'There is nothing but y and non-x,'

are all *different forms* of the *same proposition*, than to say that they are different propositions. But if logicians prefer to use the word in the sense of the Conceptualists, then it is incumbent upon them to furnish some other common name for the above group of propositions. There is a very important respect in which they are one and the same *thing*, and it ought to be possible to indicate that fact by a name. It might be said that they are the same statement-of-fact, or the same description-of-the-universe, or, possibly, simply the same statement, but it seems a pity to

introduce a new technical term into Logic, when 'proposition' and '*form* in which it is expressed' answer the purpose perfectly well.

Before proceeding to invent names for the (universal) propositions related to $x \prec y$ ('All x is y'), it will be well to set forth the entire lot of propositions to be named. They are fifteen in number (sixteen including the original proposition); *viz.*, there are four different descriptions of the universe in terms of x and y, according as one or another of the combinations, xy, $x\bar{y}$, $\bar{x}y$, $\bar{x}\bar{y}$ is said not to exist, and each of these statements can be expressed in four different ways. The following table will represent them.

TABLE I.

	o	c	0	∞
A	$x \prec y$	$\bar{y} \prec \bar{x}$	$x\bar{y} \prec 0$	$\infty \prec \bar{x} + y$
∀	$\bar{x} \prec \bar{y}$	$y \prec x$	$\bar{x}y \prec 0$	$\infty \prec x + \bar{y}$
E	$x \prec \bar{y}$	$y \prec \bar{x}$	$xy \prec 0$	$\infty \prec \bar{x} + \bar{y}$
∃	$\bar{x} \prec y$	$\bar{y} \prec x$	$\bar{x}\bar{y} \prec 0$	$\infty \prec x + y$

The propositions in any row are different expressions for the same state of facts, and the propositions in any column are differents facts in the same form of expression. The propositions in the principal diagonal (they are indicated by being inclosed in heavier lines) may be looked upon as the fundamental forms of expression for the four different statements of fact. The first and third, 'All x is y' and 'There is no x which is y,' are the Aristotelian propositions, and I shall indicate them, as is usual, by the letters A and E. The second and fourth are the propositions introduced by De Morgan. I propose to indicate them by the same letters inverted, ∀ and ∃, and to call these symbols *ad* and *ed* (the *d* in the name carrying an allusion to De Morgan). $y \prec x$ is got from $x \prec y$ by turning it about, and that suggests turning about the symbol; and so with E and ∃. $x \prec y$ and $y \prec x$ are together equivalent to the identity $x = y$ (or $\bar{x} = \bar{y}$), and in the same way $x \prec \bar{y}$ and $\bar{y} \prec x$ are together equivalent to the identity $x = \bar{y}$ (or $\bar{x} = y$). As the representative of an identity, I shall use Θ; it symbolises the flowing together of the two propositions A and ∀, or E and ∃.[1] (For

[1] Any other two distinct propositions whatever out of this scheme are equivalent to the denial of the existence of some one of the terms x, y, $\bar{x}$, $\bar{y}$. For instance, ∀ and ∃, $\bar{x} \prec \bar{y}$ and $\bar{x} \prec y$, assert together that 'Non-x is neither y nor non-y,' and hence that 'There is no non-x'. It

the corresponding particular propositions, the contradictories of these universals, I propose to use the corresponding small letters.) The four fundamental universal propositions expressed in the forms most appropriate to each,—expressed as it would be necessary to express them if our language did not permit the application of the modifier, *not*, to terms,—are,

A	$x \prec y.$	All x is y.
V	$y \prec x.$	All y is x.
E	$xy \prec 0.$	There is no xy (or, No x is y).
I	$\infty \prec x+y.$	Everything is either x or y.[1]

The capital letters by themselves shall indicate the substance of the propositions; when it is desirable to specialise the form in which they are expressed, subscript characters shall be attached to them. The subscript o shall indicate that the subject and predicate of the proposition have their original position, c that they have both been contraposed, 0 that they have both been put back behind the copula, and ∞ that they have both been put forward in front of it. We shall then have, as regards form, for any four identical propositions,

A	$x \prec y.$	All x is y.
A_c	$\bar{y} \prec \bar{x}.$	All non-y is non-x.
A_0	$x\bar{y} \prec 0.$	No x is non-y.
A_∞	$\infty \prec \bar{x}+y.$	Everything is either non-x or y.

All the sixteen propositions which are related to $x \prec y$ can then be *symbolically* named without any difficulty; the character of the letter marks the content of the proposition and the character of the subscript marks its form. It remains to invent a series of *names* which shall have the advantages possessed by this set of symbols, and the main fact to be set forth in the names is that some of these related propositions are, in a certain respect, the *same* as the original proposition, and that others are not. $\bar{y} \prec \bar{x}$

is common among logicians to say that two such propositions are incompatible; but that is not true, they are simply together incompatible with the existence of x. When the school-boy has proved that the meeting-point of two lines is not on the right of a certain transversal and that it is not on the left of it, we do not tell him that his propositions are incompatible and that one or the other of them must be false, but we allow him to draw the natural conclusion that there is no meeting-point, or that the lines are parallel.

[1] I use ∞ as an abbreviation for 'everything,' because it is easily read in that sense. For those students who are afterwards to study Symbolic Logic, it would be as well at once to write 1 as the symbol for the universe of discourse.

is usually called the 'contrapositive' proposition to $x \prec y$. I propose to call it the *contraposed* proposition (or, as I prefer to say, the *contraposed form* of the same proposition), where *contra* shall mean that the subject and predicate have both changed places. The participial termination in *contraposed* carries with it the intimation that the thing to which it applies is merely a modified form of expression for the same description of the universe. For the proposition $y \prec x$ (considered in its relation to $x \prec y$), geometers use the word 'converse' and logicians the word 'inverse'. I suggest the word *contraverse* as a ground for compromise, and the reason for it is that the *contra* indicates (the same as in the word *contraposed*) that the subject and the predicate have both changed places, the non-participial ending indicates that the proposition is *not* the same as the original one, and the last syllable indicates that the latter has suffered a complete inversion (or version) in sense. The word 'obverse,' logicians apply to the proposition 'No x is non-y' (or, 'x which is non-y is non-existent,' $x\bar{y} \prec 0$), and geometers to the proposition $\bar{x} \prec \bar{y}$. If the word be retained in the latter sense, then the *verse* in the words *contraverse* and *obverse* can serve the student as a mechanical reminder of the fact that the propositions to which they refer are, in meaning, equivalent. I therefore propose the following table of names for the sixteen forms of statement that can be made in terms of x and y and their negatives:—

TABLE II.

	o	c	0	∞
A	**original** $x \prec y$	**contraposed** $\bar{y} \prec \bar{x}$	**retroposed** $x\bar{y} \prec 0$	**pro-posed** $\infty \prec \bar{x}+y$
V	**obverse** $\bar{x} \prec \bar{y}$	**contraverse** $y \prec x$	retroverse $\bar{x}y \prec 0$	proverse $\infty \prec x+\bar{y}$
E	oblate $x \prec \bar{y}$	contralate $y \prec \bar{x}$	retrolate $xy \prec 0$	prolate $\infty \prec \bar{x}+\bar{y}$
Ǝ	offert $\bar{x} \prec y$	contrafert $\bar{y} \prec x$	retrofert $\bar{x}\bar{y} \prec 0$	profert $\infty \prec x+y$

The upper left-hand quadrant contains the propositions which there is most frequent occasion to refer to; they are of constant use in geometry, and it would doubtless conduce to clear thinking (and not be a feat impossible of accomplishment) if they were introduced into common life,—at least, in that stratum of society which has once studied geometry. The names in the upper

right-hand quadrant are constructed mechanically, or nearly so, after those of the first quadrant have been fixed upon. The *retroposed* proposition, $x\bar{y} \prec 0$, is that in which the predicate has been brought back and joined to the subject, and the *proposed* (the name is not good, but there seems to be nothing else which fits in with the entire scheme) is that in which the subject has been brought forward and joined to the predicate. As a general name for bringing over any term from one side of this copula to the other, the word *transposing* may be used.[1] It is the word which already means, in Algebra, bringing from either side of the sign of equality to the other. The fact that in the passage what was a positive term becomes a negative term, and conversely, does not prevent our thinking of the process, in Algebra, as the bringing over of *a term*, nor should it do so in Logic.

The names in the third and fourth rows are mere nonsense-words, but they suffice to complete the scheme. They may be of use at some future time, when the human mind has become much more nimble than it is now in logical forms. And, in any event, the facility with which they can be made up serves as ground for the definitive adoption of the names in the first quadrant. *Retroposed* is not so good a name for the proposition $x\bar{y} \prec 0$ when it is put in words as 'no x is non-y,' as when it is expressed 'x which is non-y is nothing,' but in the former case it may at least be looked upon as a nonsense-word. The main point which I wish to insist upon is that, since the young person has got to learn three or four of these names in any case, he should, out of humanity, since it can easily be done, be furnished with names such that the very form of the word (as the termination 'ed') carries with it the signification of *necessary and sufficient condition* that the derived proposition to which it is applied is the exact equivalent of the original one.

For such trivial changes as

from	to
There is no x which is y,	There is no y which is x;
No x is y,	No y is x;
xy is non-existent,	yx is non-existent;
Everything is either x or y,	Everything is either y or x;
There is nothing but p and q,	There is nothing but q and p;

I would propose the word *commutation*. It is the word already in use in Algebra for expressing the fact that the product ab and the sum $a + b$ are equal respectively to ba and $b + a$. But, without referring to its technical mathematical signification, it is a word which may readily be taken as meaning a change in order

[1] Prof. Bain has already felt the necessity for this word when speaking of compound propositions (*Logic*, p. 119).

without any change in value. What I particularly wish to insist upon is that

'No x is y' and 'No y is x'

differ from each other just as much as, and no more than,

'There is no xy' and 'There is no yx,'

and that the difference is very different in degree from that between

'No x is y' and 'All x is non-y'.

These require the application of one of the laws of thought to prove their equivalence; those do not. If one is thinking of the intent (or import) of the propositions 'No x is y,' 'No y is x,' that is, if one is concerned with the fact that such a proposition affirms that none of the individuals marked out by the subject have the qualities represented by the predicate, then the propositions are different; but if one is thinking of the terms merely as names of classes, they are not different—the exclusion of p from q is the same as the exclusion of q from p. The difference which does exist is just the same as that between—

'There are no citizen-students,' and 'There are no student-citizens'.

In the one case, the students are looked over, and it is found that none of them has the quality of being a citizen; in the other, the citizens are examined and found to be deficient in the quality of being a student. But Logic has no difficulty in considering citizen-student and student-citizen as, for all purposes of drawing conclusions from them, one and the same thing.[1] If it were permitted to call this trivial transformation—which is all that can take place after subject and predicate have lost their distinctness through being both (virtually) in the subject or both in the predicate—by the trivial name of 'commutation,' then 'conversion' might be reserved for the 'conversion *per accidens*' of the logician.

The formal definitions for these related propositions should then be the following:—

CONTRAVERSE:—a different proposition, got by taking the same terms, both in opposite places.

OBVERSE:—a different proposition, got by taking the contradictory terms, each in the same place.

CONTRAPOSED FORM:—the same proposition, expressed with contradictory terms, both in opposite places.

RETROPOSED FORM (or negative form):—the same proposition, expressed with the same subject and the contradictory of the predicate, both in the subject (or with the negative copula).

[1] The difference is symbolised by Wundt by distinguishing between cS and sC. It is, of course, sufficiently important in one "universe of discussion," but not in that in which the sole object is the drawing of conclusions.

PRO-POSED FORM:—the same proposition, expressed with the contradictory of the subject and the same predicate, both in the predicate.

If a proposition is already in the *retroposed* form, it cannot, of course, be *retroposed*; it can only be partly or wholly *pro-posed*.

II.

THE PARTICULAR PROPOSITION.

If a person wishes to deny the proposition 'All a is b' in the most straightforward way possible, he says, 'Not all a is b'. The copula $\prec$, which means, when positive, 'is wholly' ('a is wholly b,' or, 'All a is b'), will mean, when the sign of negation is placed over it, 'is not wholly'. $a \not\prec b$ may be read, 'a is not wholly b,' or, 'Not all a is b,' or in the words which the traditional Logic has consecrated, 'Some a is-not b'. 'Not all men are virtuous' is the same thing as 'Some men are not virtuous,' but the former is the more direct and immediate way in which to deny that 'all men are virtuous,' and therefore ought to have been chosen as the standard form of words for the contradictory of that expression. The copula, $\prec$, and its negative are the copulas of Mr. Peirce's Symbolic Logic, but that is not a sufficient reason for not using them in common Logic as a mere printer's abbreviation for 'is wholly' and 'is not wholly'. (The objection to Mr. Maccoll's sign for the same thing is that a non-symmetrical relation, such as that between the subject and the predicate of the universal affirmative or the particular negative, ought not to be indicated by a symmetrical sign.)

With the aid of this phonetic mark, brief expression can be given to the four different forms of the four different particular propositions as in Table III. Contradictories will be found in corresponding compartments of this and the previous Table.

TABLE III.

	o	c	0	∞
a	**original** $x \not\prec y$	**contraposed** $\bar{y} \not\prec \bar{x}$	**retroposed** $x\bar{y} \not\prec 0$	**pro-posed** $\infty \not\prec \bar{x}+y$
e	**obverse** $x \not\prec \bar{y}$	**contraverse** $y \not\prec x$	retroverse $\bar{x}y \not\prec 0$	proverse $\infty \not\prec x+\bar{y}$
e	oblate $y \prec \bar{y}$	contralate $y \not\prec \bar{x}$	retrolate $xy \prec 0$	prolate $\infty \not\prec \bar{x}+\bar{y}$
e	offert $\bar{x} \prec y$	contrafert $\bar{y} \prec x$	retrofert $\bar{x}\bar{y} \prec 0$	profert $\infty \prec x+y$

The youth who is forced to tread the stony path of Logic would have his way made smoother if, since he must learn to attach some letter to the proposition 'Some x is not y,' he could be provided with a letter which should carry with it the meaning that the proposition is the simple denial of 'All x is y'. This purpose would be secured if the contradictory of A were called either $\overline{\text{A}}$ or a. (I think Mr. Venn says that a has been used by Gergonne with this meaning, but I cannot find the reference at this moment.) The letter alone would then indicate the statement of fact, and if it were desired to particularise the mode of expression, a subscript o, c, 0, or ∞ might be added. The four particular statements that can be made, expressed in only positive terms, are—

a $x \prec\!\!\!=\, y$. Not all x is y, or Some x is-not y.

ɐ $y \prec\!\!\!=\, x$. Not all y is x, or Some y is-not x.

e $xy \prec\!\!\!=\, 0$. xy is not wholly wanting, or There is some x which is y.

ə $\infty \prec\!\!\!=\, x+y$. There is something besides x and y.

The four forms of statement of one and the same fact are—

o $x \prec\!\!\!=\, y$. Some x is-not y.

c $\bar{y} \prec\!\!\!=\, \bar{x}$. Some non-$y$ is-not non-x.

0 $x\bar{y} \prec\!\!\!=\, 0$. There is some x which is non-y.

∞ $\infty \prec\!\!\!=\, \bar{x}+y$. The world is not made up of y's and non-x's (of the happy and the vicious).

The relations of every proposition to any proposition which may be thought of as the starting-point can be described in exactly the same terms as in the case of universal propositions. (It should be remembered that these terms are merely relative; $\bar{x} \prec\!\!\!=\, \bar{y}$ is not in itself an obverse proposition, but merely the obverse of $x \prec\!\!\!=\, y$.) The identity of x with y is affirmed by the *combination* of two propositions A and ⅄, as $x \prec y$ and $y \prec x$. It is simply denied by the *alternation* of two propositions a and $ɐ$; to say that the x's are not identical with the y's is to say that either there are some x's which are not y's or else some y's that are not x's. As any other two universal propositions amount to the simple denial of the existence of some term, in the same way, to say that either there is some y which is non-x or else there is some y which is x, is merely to say that in any case there is some y, that is, to simply affirm the existence of y.

III.

The Eight Copulas.

The four modes of expression that are given to the starting-proposition in Table I. are not the only possible modes of expression. They are the forms got by preserving the copula the same, and varying the signs and the positions of the terms. By giving different meanings to that connecting-link, the four different things may be said, both in the universal and the particular, without any change in the terms. For the sake of simplicity in the rules, a slight change may be made in Mr. Peirce's copula; namely, the horizontal line may be inverted and allowed to fall within the angle to the right, thus: $\leqslant$. For the other universal proposition which is essentially affirmative, but which is symmetrical, we can take the same sign turned up; as, $x \curlyvee y$, 'All but x is y'. The ordinary negative proposition, 'None of x is y,' or, 'x is wholly excluded from y,' is naturally written with a completed wedge, $\bar{\vee}$; and for the remaining universal proposition, which is also essentially negative, 'None but x is y,' we may use the same sign with the angle turned down, thus: $\bar{\leqslant}$. The particular propositions which contradict these universals will then naturally be written with the same symbols made negative or made affirmative as the case may be. The Table will then stand thus for the four different statements that can be made in both quantities:—

TABLE IV.

All of x is y.	None but x is y.	None of x is y.	All but x is y.
A $x \leqslant y$	∀ $x \bar{<} y$	E $x \bar{\vee} y$	∃ $x \curlyvee y$
a $x \bar{\leqslant} y$	ɐ $x < y$	e $x \vee y$	ə $x \overline{\curlyvee} y$
Not all of x is y.	Some besides x is y.	Some of x is y.	Not all but x is y.

And for the four ways of saying the same thing, we shall have:

Universal	$x \leqslant y$	$\bar{x} \bar{<} \bar{y}$	$x \bar{\vee} \bar{y}$	$\bar{x} \curlyvee y$
Particular	$x \bar{\leqslant} y$	$\bar{x} < \bar{y}$	$x \vee \bar{y}$	$\bar{x} \overline{\curlyvee} y$

It will be observed that of the universal propositions there are two negative and two affirmative, and that the same is true of particular propositions. The distinction between universal and particular copulas is this: every universal is made up of an odd

number of marks (namely, three), and every particular is made up of an even number of marks (namely, two or four). The rule for the transformation of a statement from one form to another is equally simple: any rotation of a copula necessitates a change of sign in the *subject* (as, $\bar{x} < \bar{y} = x \vee \bar{y}$), and the introduction of a negative sign into the angle of a copula, or the reverse, necessitates a change of sign in both subject and predicate (as, $x \barwedge \bar{y} = \bar{x} \mid y$). It follows that to do both things at once necessitates a change of sign in the *predicate* only (as, $\bar{x} < \bar{y} = \bar{x} \barvee y$). To illustrate these rules farther, let us start, for instance, with $x \barwedge \bar{y}$, 'No x is non-y'. First put the sign of negation inside the angle, and we get for an equivalent statement (if we change the sign of both subject and predicate) $\bar{x} \barvee y$, 'All but non-x is y'. Then rotate this last symbol (at the same time changing the sign of the subject) and we have for an equivalent statement $x \leqslant y$, 'All x is y'. If, however, we start with $x \barwedge \bar{y}$, 'No x is non-y,' and change the place of the non-oblique line and at the same time rotate the symbol (and change the sign of the predicate, as the rule requires) we get $x \leqslant y$, 'All x is y,' the same as before. In applying the rule to particular propositions, it must be observed that a double mark inside an angle, as well as a double negative sign, is the same thing as no mark at all. Start, for instance, with $\bar{x} \barvee y$, 'Not all but non-x is y,' and put the sign of negation within the angle, and we get for an equivalent statement (changing the sign of both subject and predicate) $x \vee \bar{y}$, 'Some x is non-y'. Rotate the copula and we get (changing the sign of the subject) $\bar{x} < \bar{y}$, 'Some besides non-x is non-y'. Now take out one of the (double, and therefore invisible) horizontal lines from within this last copula, leaving the other one (and at the same time changing the sign of both subject and predicate) and we get $x \barleq y$, 'Not all of x is y'. Otherwise, the change from $\bar{x} \barvee y$, with which we started, to $x \barleq y$, can be effected at once by a simple rotation (and a consequent change of sign of the subject). The rule may also be expressed thus: Given any proposition in any one of these eight copulas, the same proposition expressed with copula of opposite *quality* must have both subject and predicate of opposite sign; expressed with copula of opposite *symmetry*, it must have subject only of opposite sign. With the symmetrical copulas, subject and predicate can be freely interchanged; with the non-symmetrical copulas, subject and predicate change places upon the condition that their quality also is changed. The simple symmetrical copulas, $\vee$ and $\barwedge$, can be inserted anywhere in a logical product, and the worse looking symmetrical copulas can be inserted anywhere in a logical sum. Thus, $a \barwedge bc = ab \barwedge c$, and $a + bc \barvee d$ ('All but a and bc is d') $= a \mid bc + d$ ('All but a is bc or d').

IV.

The Laws of Thought.

It is very singular that the form of expression 'Everything is either x or y' has been treated with such contumely by logicians. It is of common use in daily life. It is necessary to a complete scheme of expression; when it has once been admitted, the problem is readily solved of expressing any proposition whatever, given in terms of S and P, in an exactly equivalent form, with S negative, or with P negative, or with both S and P negative.[1] But, strongest reason of all for not neglecting it, *it is the only form in which one of the Laws of Thought can be expressed.* It is very singular to begin Logic by attributing great importance to the statement that everything is either a or $\bar{a}$, to make frequent use of it in the most fundamental parts of the subject, and then to utterly ignore it as a form of expression the laws for the use of which need to be plainly set forth. The primary Laws of Thought, rightly considered, are four in number, and they are the matrices, so to speak, for the four forms of expression of Table I. The first is the law of the positive term,

$$a \prec a.$$

The second is the law of the negative term,

$$\bar{a} \prec \bar{a}.$$

Either may also be called a law of identity. The other two are the laws which regulate the relations of the negative term and the positive term to each other. They are,

$$a\bar{a} \prec 0 \text{ and } \infty \prec a + \bar{a}.$$

The first expresses the fact that a term and its negative have no part in common, and the second that they together occupy the whole field of discourse. The first is usually called the Law of Contradiction. It is a very unfortunate name for it. The terms a and non-a are called contradictories, and the law of contradiction ought to mean the same thing as the law for contradictories,—that is, the law which furnishes the necessary and sufficient condition that two terms should be mutual contradictories. But it takes *both* the above laws to furnish that

[1] It is as important as any other form when it comes to the expression of the compound proposition. Either 'No a is b' (p) or else 'All c is d' (q) means that $\infty \prec p + q$, that is, that all possible cases in the given universe of thought are summed up in the case of no a being b together with the case of all c being d. If it had not been for the accident of Aristotle's having excluded this form of statement from his simple propositions, it would probably never have occurred to Lotze that the Disjunctive Proposition is the expression for some pure and subtle form of knowledge of a superior kind to that which can be expressed in such words as 'If some a is b, then all c is d'.

condition. Suppose I wish to find out whether the colours red and blue on a certain palette are the exact contradictories of each other: I have to convince myself both that they do not overlap and that they together cover the entire palette. It is these two properties together that constitute their contradictoriness. The first of them, which states that a and $\bar{a}$ have nothing in common, I propose to call the Law of *Mutual Exclusion;* it is true that this is too suggestive of 'Excluded Middle,' which is the old name of the other law, but it is too plainly the right name for the thing to be given up on that account. The other property, which states that a and $\bar{a}$ together fill up the whole universe of discourse, I propose to call the Law of *Collective Exhaustion*, or simply of *Exhaustion*. These two names, besides being exactly descriptive of the properties in question, have the great advantage of lending themselves to the formation of adjectives. If two terms have been discovered to be *mutually exclusive* and *exhaustive*, either can be at once set down as the negative of the other. When it comes to the discussion of logical division, these two descriptive epithets are not only indispensable, but actually in use (Bain, *Logic*, pp. 426-428). Why not use the same names for the same properties when those properties first come into notice? The following are, then, the Laws of Thought in tabular form:—

TABLE V.

Laws of Identity,	(o)	$a \prec a$. Positive term.
	(c)	$\bar{a} \prec \bar{a}$. Negative term.
Laws of Co-relation of Positive and Negative Terms.	(0)	$a\bar{a} \prec 0$. Mutual Exclusion.
	(∞)	$\infty \prec a + \bar{a}$. Exhaustion.

(c) is of somewhat, but not entirely, fictitious interest; in propositions in two different terms, the contraposed form does not differ in itself from the original form. Instead of saying that (0) and (∞) are Laws of Thought, and searching for their origin and sanction in various mysterious regions of the mind, it is better to regard them as furnishing together a definition of the negative term. What do we mean by the negative of anything, if we do not mean *all* of that which is *other than* the thing itself?

V.

On the Proving of Related Propositions.

One reason why Logic seems to the student so remote from the reasoning of everyday life is that, besides making much ado over some very simple arguments, it does not attempt to grapple at all with others that are equally simple, and equally regular, and of equally frequent occurrence. 'No ripe grapes are sour,' 'No sour grapes are ripe,' 'Nothing which is sour when ripe is a

grape,' are statements which no child would have any trouble in seeing to be equivalent, as matters of fact, and which it would give Logic very little trouble to take account of. If it were not for some unnatural restrictions, such as that subject and predicate must always be considered single and indivisible, a general *aperçu* of the laws of thinking would be more easily got than now, and would cover a larger field. To use a favourite quotation from Hesiod of Professor Sylvester's, "'Tis strange how much greater the part is than the whole!" For instance, every transposition which can be performed upon the proposition limited to two terms is merely a particular case of the one simple rule for transposition in general. What child would hesitate, if asked whether these two propositions are identical or not—'The undevout astronomer is mad,' and 'Every astronomer is either devout or mad'? The identity between $\bar{d}a \prec m$ and $a \prec m + d$ is established at once by a simple reference to the Laws of Thought (or to the Properties of the Negative); since undevout astronomers are mad, and devout ones are devout, they are all either devout or mad; and, contraversely, if all astronomers are devout or mad, since the undevout ones are not devout, they must be mad. The rule is: *Any term which enters the subject as a factor is-the-same-thing-as its negative in the predicate as an alternative.* (This is the only transposition possible with this copula, without loss; the factor must be a factor of the whole subject and the alternative must be an alternative by itself.) With the simple proviso that, of the two sentences, 'There are no virtuous kings' and 'No kings are virtuous,' the first shall be taken as the normal form instead of the second, every case of identical propositions (except simple commutations), *whether affirmative or negative, universal or particular*, is a case of this one single rule. When the *last* term is brought away, it must be remembered that the unexpressed part of the subject is not the same as the unexpressed part of the predicate. The proposition $a \prec b$ means in full $\infty a \prec b + 0$, that is, 'Everything which is a is either b or else non-existent'. (No consistent Logic of universal propositions is possible except with the convention that they do not imply the existence of their terms.) If, in this proposition, we bring back the b, we have $a\bar{b} \prec 0$, if we bring forward the a, we have $\infty \prec \bar{a} + b$, if we make both changes at once we have $\bar{b} \prec \bar{a}$. And for particular propositions the case is exactly the same.

Is it not better for the student to stretch his reasoning powers to the extent of taking in the logical equivalence of the two sentences, 'All ripe grapes are sweet' and 'All grapes are either sweet or else unripe,' and then to have solved all questions of logical equivalence, rather than to spend the time which he must now devote to the discussion of obversion, contraposition and obverted contraposition, each applied in accordance with different rules to each of the four propositions of Aristotle?

VI.—DISCUSSION.

"SOME FUNDAMENTAL ETHICAL CONTROVERSIES."

I.

By Professor T. FOWLER.

In Prof. Sidgwick's article, in the last number of MIND, entitled "Some Fundamental Ethical Controversies," he discusses two points, on which, in the Second Part of my *Principles of Morals*, I had expressed divergence from his views on the same subjects as stated in his *Methods of Ethics*. I wish to reply to his criticisms, or rather, in the light of what he has said, to re-state, for the sake of better understanding, my own opinions, as clearly and briefly as possible. And as, on most points of ethical theory, Prof. Sidgwick's views and my own are in general agreement, I need hardly say that my remarks will be free from any hostile bias.

The first and, as I conceive, less important point raised by Prof. Sidgwick refers to a passage in my *Principles of Morals*, pt. ii., ch. 9, pp. 329-31, in which I criticise an argument employed by him, with reference to the Free-Will controversy, in his *Methods of Ethics* (pt. i., ch. 5), to the effect that, at the moment of action, I am conscious of my power to choose between two alternatives. I had supposed that this argument was advanced as an attempt to resolve the antinomy of Free-Will and Determinism, or, at least, as a set-off against the formidable array of cumulative evidence in favour of Determinism which Prof. Sidgwick had just enumerated. But, in MIND, he informs his readers that "the argument did not aim at a *theoretical* solution of the difficulty, caused by the conflict between the 'formidable array of cumulative evidence offered for Determinism' and the Libertarian 'affirmation of consciousness in the moment of deliberate action': it aimed merely at a *practical* solution of the difficulty, by showing that for purposes of practical reasoning the two opposed arguments cannot really collide". I must own that I had regarded the argument as of the nature of a practical argument in a theoretical discussion, much like the argument of Bishop Butler (*Analogy*, pt. i., ch. 6) that, whatever their speculative opinions, men always act as if they were free. Thus viewed, it seemed to me, it could not be regarded as a decisive argument that, in the moment of action, a man seems to be conscious of the power of choice between two alternatives, if, in reflecting on the past or forecasting the future, he can regard the same or a similar action as entirely determined by pre-existing

causes. But Prof. Sidgwick's authority as to his own meaning is, of course, decisive. I must, however, plead in extenuation of my misunderstanding, that, without this clue being supplied by the writer, the mistake is one into which, as it seems to me, even a very careful reader may naturally fall. As to the merits of the question, I certainly cannot deny either that, in the moment of deliberate action, we feel ourselves free to choose between different alternatives, or that, in attempting to forecast the future, we usually assume that men will be guided by character, motives and circumstances. Hence, as I have stated in my book (*Principles of Morals*, pt. ii., pp. 331, 337-9), I entirely agree with Prof. Sidgwick on the unimportance of this controversy in its bearings on the regulation of actual conduct. But had, as I erroneously conceived, Prof. Sidgwick meant to appeal to our consciousness of the power of choice in the moment of action as an argument of weight in a theoretical discussion of Determinism, I think it would be at least counterbalanced by the consideration that, when we are not in the situation of having a practical decision forced upon us, but are able coolly to reflect on our past acts, we are generally able, by the exercise of a sufficient power of analysis, to detect the antecedent circumstances of character, motive, &c., on which our volitions depended.

Before dismissing this question, I may, perhaps, be allowed to remove a possible misapprehension as to my own views, which might be caused both by Prof. Sidgwick's article and by what I have myself said in the previous paragraph. My own ultimate conclusions are not in favour of the Determinist position. But, while recognising the unanswerable character of the arguments for the Determinist hypothesis, so long as we confine ourselves to the analysis of volitions, I equally recognise, to quote my own words (*Principles of Morals*, pt. ii., p. 336), that these arguments are "confronted by facts of almost hourly occurrence in the lives of us all which, on the hypothesis of their validity, seem to be inexplicable. Why should we praise or blame others,—why, on reflection, should we approve or disapprove of our own acts and dispositions,—if we regard both others and ourselves as merely and exclusively determined by antecedent circumstances? Surely both praise and blame, self-approbation and self-disapprobation, imply that the objects of them had the power of acting otherwise than they did, and, if of acting otherwise than they did, of being otherwise than they were. And, however it may be with regard to our praise and blame of others, which may possibly, in some cases, be modified, though they are certainly never extinguished, by a growing sense of the difficulties of conduct; yet it undoubtedly seems to be the fact that, with increasing knowledge and experience, both of ourselves and of the world outside us, we do not become less, but more, sensitive in the feelings and judgments with which, on reflection, we regard our own acts and habits. But, if these acts and habits were predetermined by the

concurrence of external and internal conditions, they surely were inevitable; and, if inevitable, how can they be the proper objects of approbation or disapprobation?" Here, it seems to me, in the present or any probable state of our knowledge, the question must be left. We may, indeed, conjecture that the Self, operating by laws of its own, unknown to us, has some power of self-determination, independently of circumstances; but, after all, this is merely a hypothesis, not only unsupported by positive proof, but, so far as we can foresee, admitting of no verification.

The more important point raised by Prof. Sidgwick, and that on which there appears to be a real difference between him and myself, is a question connected with the fundamental conceptions of 'right' and 'ought'. He regards these notions as "ultimate and unanalysable". On the other hand, I have expressly stated (*Principles of Morals*, pt. ii., p. 227) that I maintain the idea of right to be "explicable by the idea of good," and the word 'ought'—at least, in one of its applications—(I shall speak of another application presently), is, in the case of human agents, simply the verb corresponding with the substantive 'right'. As I seem to have misunderstood the exact position taken by Prof. Sidgwick under the former head, I think he may have similarly failed to perceive the exact position assumed by myself on the present question. To save space—and, if possible, to prevent any further controversy on a subject on which I can foresee that we shall probably not arrive at an agreement—I will simply content myself with stating here, as briefly and clearly as I can, my own conception of the proper relation subsisting between what may be called the fundamental ethical ideas—those of 'right,' 'good' and 'ought' (or 'obligation'). When we do a right act, or do as we ought, as, for example, when we tell the truth, or pay our debts, or practise temperance, we are, in the two former cases, preferring the greater good of others to the (often imaginary) lesser good of ourselves, in the last case, the greater good of ourselves to the (often imaginary) lesser good of ourselves. In all these and similar cases we always make conscious choice of the greater good or lesser evil. Thus, the acts of which we approve, which we ought to do, which we denominate right, fall under the more general conception of good acts—or, in other words, they are explicable by the idea of good. One great advantage of their being thus represented is that good and evil admit of degrees, and of comparison with one another, and are thus much more easily applicable to the measure of concrete actions than are more absolute conceptions, like right and wrong. But it may be said that, according to this mode of viewing virtuous acts, veracity, honesty, temperance, and the like, are only means towards the attainment of a further end, the general good of ourselves, or of society, or of both. But now arises the question whether the good is itself an ultimate idea, or whether it admits of being explained by reference to some still

more general conception; and, again, whether we may not properly say that it is right, that we ought, that we are under an obligation, to pursue the greatest good, or to prefer the greater to the lesser good. With regard to the first question, I may reply, as I have done in my *Principles of Morals* (pt. ii., p. 264), that "the good of man, as a whole, may be conceived of as the development of the various parts of his nature in harmony with one another, and with the social and material medium in which he exists". And, in particular cases, anything which promotes this development is good, anything which retards it or thwarts it is evil. Thus, the idea of good is carried still one step further back, and made dependent on our conception of the constitution of human nature. And beyond this step it would appear as if we cannot go, unless we quit the region of ascertainable fact, and indulge in speculations on the constitution and purposes of the Universe. But it remains to be asked whether the ideas of 'right,' 'ought,' 'obligation,' have any application to this connexion between the conception of 'good' and that of 'human nature'. Can we say that it is right, that we ought, or that we are under any obligation to pursue the greatest good, or to choose good rather than evil? I think that we are undoubtedly justified in using all these expressions, though, as the word 'right' is here used in a somewhat unusual sense, it seems preferable to employ one of the other equivalents, appropriating the term 'right' to specific acts or classes of actions, which are only a means to the general good. But we now use these terms in a different sense, or rather in a different application. They were previously used in relation to the intermediate conception of 'good'. They are now used in relation to the ultimate conception of human nature itself, whose constitution, development and tendencies thus become, while we confine ourselves to the sphere of verifiable experience, the ultimate source of moral obligation. The ultimate obligation to morality then seems to me to reside, not in any abstract and unanalysable idea of 'ought,' 'right' or 'duty,' but in the very make and fashion of human nature, in the complexus of the several feelings, co-ordinated by the reason, and issuing in what we call the moral faculty. We think and feel that we 'ought' or 'are obliged' to do that to which our nature, as a whole, or the moral faculty, as its resultant and spokesman, prompts us; and to say that we 'ought' or 'are obliged' to follow a certain course of action is the same as to say that it is imposed upon us by our nature, not, indeed, in its original condition, but in the stage of development to which it has now attained. Between specific courses of action and the ultimate obligation there is usually, in the case of reflective men, interpolated the conception of the greater good or lesser evil, but, when we come to ask why we should act in accordance with this conception, the only answer, it seems to me, which a moralist, as such, can give, is that we are impelled

(though, of course, not irresistibly impelled) to act thus by the very constitution of our nature. It is this theory which I have attempted to sketch in pt. ii. of my *Principles of Morals*, and specially in the 5th and 6th chapters. The examination of human nature, its various principles, developments and capacities, in their relation to one another, and to the material and social medium by which they are moulded, and which, in turn, they mould, or, in other words, the study of the human mind, and of the growth of man and society, alone seems to me to supply the material out of which an intelligible system of morals can be constructed, adequate to the practical needs of men, and capable of carrying equal conviction with other branches of knowledge.

II.

By L. A. Selby-Bigge.

In the last number of Mind, Prof. Sidgwick has done a thing for which, I am sure, many of his readers and admirers will be very grateful. He has taken three of his principal positions out of their original setting, and re-stated them simply and plainly to be judged on their own merits. It is much to be wished that other people who write large books would do the same thing; for one is often afraid of handling by itself any single position taken up in a large book, lest one should be doing the writer an injustice by viewing it out of relation to the system or argument of which it is a part or the purpose with a view to which it is maintained. Of the *Methods of Ethics* it is especially hard to be critical: its very virtues have made it peculiarly difficult to grasp, or, at least, to judge; there are so many candid admissions, so many able and eloquent statements of the other side, so little suppression of material facts, that many readers have professed respectful failure to entirely understand the author's views sooner than commit themselves to a treatment of it which they feel would be very possibly unfair and very probably incomplete. Few who have read the book have not learnt much from it; but, I think, there are also few who are quite certain what it all comes to. In Mind, however, Prof. Sidgwick has selected certain articles from his stock and placed them fairly on the counter by themselves, and asks us squarely, 'What is it you don't like in them, and what is it you don't understand?' I am sure I shall only be doing what Prof. Sidgwick wants if I try to answer his question as squarely as it is asked, confining myself to the first point on which he challenges the world—the Freedom of the Will.

Before I proceed to my special objections to Prof. Sidgwick's theory, I ought to confess that I do not quite understand what he means by a practical solution, which is all he claims to have

attained. When I talk of a practical solution I generally think of a solution 'per ambulationem simplicem,' but I do not think that this is what Prof. Sidgwick means by a practical solution of the difficulties connected with the assertion of the freedom of the will. Does he mean such a solution as shall be sufficient for practical purposes and the conduct of life; a solution which shall protect us from being hampered and our actions paralysed, though not satisfying our intellectual curiosity; a solution which shall allow those whose lives have been disturbed by the speculative contradictions to go on doing as they used to do? But he seems hardly to think such a solution necessary—indeed, he tempts us to think that his practical solution is, that none is required, because out of doors no one is in the least troubled by the difficulties which assail him in his study, nor does anyone act in any way differently when he substitutes the creed of the Libertarian for that of the Determinist, or conversely. But he also, I believe, reaches another solution which, though not complete, is of dignity enough to be called theoretical. It does not show the antinomy between Necessity and Freedom to be itself necessary, but it does show that, though actual and perpetual, it does not produce a deadlock, because to each belongs a separate province: in other words, that, though the same action is necessary and free, it is so from different points of view. This solution, of course, stops short of showing why these two separate points of view exist, and so, I suppose, it is incomplete; but why it should be denied the name theoretical I cannot quite see. In this case, I am inclined to trace it to a general tendency in the author to undervalue the contributions of Kant to Ethics—a tendency (unconscious, I am sure) which shows itself further in a lack of precision in defining the limits of the two provinces of necessity and freedom, and also in an unnecessary exaggeration of the contradiction between them. Of this I shall speak again later.

I. My special objections are, first, to his treatment of the point at issue between Determinists and Libertarians as of no practical importance—that is, to his assertion that, except in one special case in which theological considerations are introduced, it will make no difference in our conduct whether we adopt one view or the other.

(*a*) In support of this position, he shows that, though the adoption of Libertarian views may throw some general doubt on the accuracy of the calculations we make about future actions, whether our own or those of others, and about means to ends, still it cannot in any way modify the details of those calculations: our confidence in them may be a little weaker, but they will remain the same. Now, with this statement I have no fault to find, except that Prof. Sidgwick understands by the Libertarian view the vulgar opinion that our actions are determined by no law at all, a view which stands contradictorily opposed to that of

the Determinist; whereas by the Libertarian view I understand the opinion that our actions are determined by moral laws, thus considerably reducing the antithesis between Determinism and Libertarianism. According to the latter acceptation of the term Libertarianism, its adoption could neither modify nor cast general doubt upon our calculations of future events, because actions, as events, are not in any way contemplated by it. However, I do not wish to press this, because I believe Prof. Sidgwick is not really quite sure in which sense he understands and accepts Libertarianism: indeed, it is this uncertainty, which I believe I can detect in his writings, which is the main article in my objections to his position.

(*b*) He shows that Determinism is always actually held in conjunction with Libertarianism, and that the latter, to a very great extent, depends on the former and uses its assumptions. To this, again, I have no objection, except the rather fundamental one just mentioned.

(*c*) But Prof. Sidgwick does not show that the *substitution* of Determinism for Libertarianism would have no considerable practical effects, and that is the point which I think he is bound to prove, if he is to justify his position. The fact that ordinary people do generally effect a compromise and establish a *modus vivendi* between two apparently contradictory theories, does not show that it is of no importance whether you adopt one to the exclusion of the other. It shows that you can get on by adopting both, simultaneously or alternately; but it does not show that you can get on equally well by adopting either. The fact that the happy inconsistency of the Determinist counteracts—and, indeed, conceals—the legitimate consequences of his theory, and, further, renders it harmless and even useful, is no reason why we should cease to combat it in works devoted to the theory of Ethics. The fact that every Determinist is also a Libertarian only shows that he does not carry out his theory, not that his theory involves no practically-important consequences: a theory may have most important consequences, even though no one practises it. The fact that those consequences are nowhere evident in private or public life may be a reason why the statesman should treat the theory lightly, but it is no reason why the moralist should do likewise. Of course, I should not think of denying that it is "quite possible to compose a treatise on Ethics which should completely ignore the Free-Will controversy" (*M. E.*, bk. i., chap. 5, § 1); but, as Prof. Sidgwick seems to admit (*ib.*, § 2), the meaning which you give, in your treatise, to "'ought,' 'responsibility' and similar terms" will clearly indicate which side you take in the controversy: you may ignore the conflict, but you will only be able to do so by assuming that one side or the other is decisively victorious.

But Prof. Sidgwick, in MIND, still more plainly admits the point for which I am contending. He says (No. 56, p. 477):—

"I am quite willing to admit that this conviction *may* be illusory: that, if I knew my own nature, I *might* see it to be predetermined that, being so constituted, and in such circumstances, I should act on the occasion in question contrary to my rational judgment. But I cannot conceive myself seeing this, without at the same time conceiving my whole conception of what I now call 'my' action fundamentally altered: I cannot conceive that, if I contemplated the actions of my organism in this light, I should refer them to my 'self'—*i.e.*, to the conscious mind so contemplating, in the sense in which I now refer them."

That is to say, if I thoroughly applied the Determinist theory without any admixture of the Libertarian, I should no longer regard myself as responsible for my actions in the same way as I do now; I should no longer use 'ought' and 'desert' except in new significations (cp. *M. E.*, i. 5, § 2). Surely Prof. Sidgwick would not say that such a total alteration of the relations between my 'self' and my actions would not be a grave practical matter. I am obliged to say '*would* not be,' because I agree with Prof. Sidgwick that no one does apply the Determinist view rigidly and consistently, and that "I must use in thinking about action the only conception of human volition that is now possible to me . and this is strictly incompatible with the conception of my choice between rational judgment and irrational inclination as predetermined".

Prof. Sidgwick does, however, advance one definite argument in support of his position. He says (No. 56, p. 476):—"I do not think that any determinist will argue that his conclusion either ought to have or ordinarily does have this paralysing effect on the practical reason"; *i.e.*, that it does lead men "to abstain from the effort to act rationally, and consciously surrender themselves to the play of mere impulse". To this I reply, that we are agreed that it never does have this paralysing effect, but that, if we wanted an assertion that it ought to have it, we certainly should not go to the Determinist for it. The Determinist is not such a fool as to admit that his theory cuts at the root of all morality, and is hopelessly paradoxical. As we all know, he is much more alive to his own interest, and protests, on the contrary, that his view is indispensable to morality. In saying this, I do not wish to accuse the ordinary Determinist of dishonesty; I only wish to point out that he is probably made of the same stuff as the Libertarian, and is no more than his opponent inclined to regard suicide by paradox as a duty.

II. Having now dealt with the first part of Prof. Sidgwick's "practical solution," *viz.*, that it does not matter which view we take, I come to the second part, *viz.*, that we all of us do and must use both principles, but that it is from different points of view that we do so. With this solution, so far as it goes, I entirely agree. But, in Prof Sidgwick's statement of it, I find a certain want of clearness, and even a certain amount of prejudice, sufficient to make me doubt whether I really hold the same solution as he does.

(*a*) In MIND, p. 475, Prof. Sidgwick says:—"When we are ascertaining . . . what choice it is reasonable to make between two alternatives of *present* conduct, it is as impossible for us to use Determinist conceptions as it is impossible for us to use Libertarian conceptions when we are endeavouring to forecast future conduct". This is slightly misleading, for it suggests that the two sets of conceptions do not collide only because the one applies to the future, and the other to the present. (The italics in the quotation are Prof. Sidgwick's own.) Of course, Prof. Sidgwick would admit that it is quite as possible to inquire what course of action *will be* or *was* reasonable, as what course *is* reasonable. So the antithesis might be better stated thus: 'When we ask what will happen in the future, we use determinist conceptions; when we ask what is reasonable, *i.e.*, what ought to happen in the future, we use libertarian conceptions'. Now this is exactly what I am contending for, and so Prof. Sidgwick may not unreasonably ask: 'Why then are you not contented, since this is just what I mean?' Unfortunately, I am still not quite sure that is what he means, though, perhaps, after what he said long ago (*M. E.*, i. 5, § 2), such uncertainty may seem to him sheer ingratitude.

(*b*) It is not really this, for in MIND, p. 479, I find him saying:—"I have restricted my consideration to the choice between the alternatives of 'rational' and 'irrational' conduct. It is, I conceive, this alone that concerns us, from an ethical point of view, not the possibility of merely indeterminate choice—of what Green calls an 'arbitrary freak of unmotived willing'."

Now I am not sure of the meaning of this sentence. Does Prof. Sidgwick mean that freedom is to be affirmed only in the case of choice between alternatives, and not in the case of volition where no alternatives are suggested? Or does he mean that freedom is only to be affirmed where one of the alternatives is conceived of rational or right? It is to be observed that Prof. Sidgwick "restricts" himself to the latter case as being the only one of ethical importance, which seems to imply that he could give his argument a wider application, and could use his evidence to prove more, if only he chose to do so. In *Methods of Ethics* (i. 5, § 3) he seems to me to combine both positions. He contrasts the "cumulative evidence" for Determinism with "the immediate affirmation of consciousness in the moment of deliberate action . . . that I can now choose to do" what I now conceive as right or reasonable, "however strong may be my inclination to act unreasonably". It is just this "immediate affirmation of consciousness" which offends me, though, likely enough, I have already swallowed many camels. Is not this "immediate affirmation" equally present wherever there are alternatives of any kind, whether conceived of as good, bad or indifferent? Whenever I stop to reflect on any course of action, does not my "consciousness" always affirm my ability to choose it? And is

not this affirmation perilously like the product of an illusory mental experiment? Is it not just this evidence which Determinists have found it easiest to explain away? I should be very sorry to leave my Libertarian belief to rest on such a very small base, and it is because Prof. Sidgwick deliberately prefers the narrower to the wider base that I cannot accept him as my champion. Or is it that, while accepting the Kantian conclusion, he is unwilling to accept the Kantian evidence, and so tries to find some new evidence which shall save him from the necessity of treading in the Kantian footsteps?

(*c*) The last quotation from the *Methods of Ethics* contains a point which I think well deserves attention, *viz.*, the alleged contrast between the cumulative evidence for Determinism and the solitary piece of immediate evidence for Libertarianism. Prof. Sidgwick gives some grounds for supposing that by this "cumulative evidence" he only means that the sphere which has been subjected to laws of nature has been continually widening; that laws have been discovered for phenomena previously regarded as capricious or fortuitous, while no one has tried to extend the limits within which Freedom obtains. But he seems also to imply that there is a real difference not only of quantity but also of quality in the evidence for the two positions. I do not like to express a general philosophical opinion very positively without drawing trenches of various kinds round me, but I am inclined to maintain this—that Liberty and Necessity were once and for all melted in the same pot by Hume, whose sagacity in this matter is beyond all praise; that since then their interests cannot possibly be divided; that if they are ever to be restored to us it must be by the same method. I should also be inclined to maintain that for neither Liberty nor Necessity is there the slightest direct or immediate evidence, but that for both of them there is the strongest possible indirect. Necessity is vindicated solely by the fact that all men make use of the conceptions of reality and illusion, truth and falsehood: Freedom, solely by the fact that all men make use of the conceptions of good and bad, ought and ought-not, right and wrong. Neither necessity nor freedom are 'empirical notions,' though they are abundantly vindicated by the fact that they are essential to and implied in those conceptions without which we should be neither rational nor moral. Whether freedom is or is not the *ratio essendi* of the moral law, the moral law seems to me most certainly the *ratio cognoscendi* of freedom. That it does not seem to Prof. Sidgwick so certain is perhaps due to his appreciation of the clearness and sufficiency, for practical purposes, of the meaning given to the moral law by the Determinists, an appreciation producing forgetfulness of the fact that, as so interpreted, the moral law is not after all what ordinary people mean by the moral law (cp. *M. E.*, i. 5, § 2).

III. I am tempted in conclusion to say a few general words in

defence of Kant, undeterred by the fear of appearing old-fashioned or a barren formalist. I think that in this matter and all through the *Methods of Ethics* Kant has exercised a distinctly repellent influence over Prof. Sidgwick, and this repulsion is easily intelligible. Kant made a great deal more of the connexion between the moral law and freedom than he was warranted in doing, and his failure in developing this connexion is obvious. But I do not think that Prof. Sidgwick is the man who ought to be offended at this; he has himself so admirably distinguished between the two different questions "What ought I to do?" and "What is the meaning of 'I ought'?" that he should not be hard on Kant for having confused them, or rather for having thought that an inquiry into the latter question would enable him also to answer the former. Kant's merit in having elucidated the meaning of Duty is surely so conspicuous that we can afford to forget his attempt to deduce the duties. I do not claim for Kant in any way that his connexion of free with rational or disinterested action (though I do not interpret 'rational' in the same sense as Prof. Sidgwick) adds anything valuable to his theory, nor that his detailed explanation of Freedom is any more successful than that latterly attempted by Prof. Green, who seems to me to have been very near asserting that "psychological Freedom" which Kant made such fun of; but I do hold that in his definite assertion that the moral law is the sole and sufficient evidence for Freedom he was on ground a great deal surer than that on which the ordinary Determinist so confidently stands.

Perhaps it is this same repulsion which leads Prof. Sidgwick to underestimate the practical importance of the question. If it is by a keen sense of the grotesqueness of disputation on the freedom of the will that he is led to minimise its importance, I can sympathise; from the disputations of philosophers grotesqueness is seldom far distant, and we ought perhaps to be more afraid of it than we are. Of course, too, from one point of view no speculative discussion, and no speculative solution, is of practical importance, and this is especially true in Ethics, and in Ethics especially true of this dispute, where it is admitted by the one party that all men think themselves free, and by the other that if they think themselves free this is quite sufficient to render the moral law binding on them. But if speculative Ethics is of importance, and I believe it to be important even though we do not go to it for a rule of life, then in it I believe the question of the Freedom of the Will to be of primary importance.

VII.—CRITICAL NOTICES.

First and Fundamental Truths, being a Treatise on Metaphysics. By JAMES McCOSH, D.D., LL.D., Litt.D., &c. London: Macmillan & Co., 1889. Pp. x., 360.

From his former works the veteran Dr. McCosh is known as an independent disciple of Hamilton and a supporter of the doctrine of Natural Dualism. In the present volume he expounds his Realistic Philosophy. After a brief introduction defining Metaphysics as "the Science of first and fundamental Truths," we find the subject distributed into three parts, the first of which contains a general view of primitive principles. Part ii. enters upon the particular examination of these principles, and is subdivided into four books, dealing with primitive Cognitions, primitive Beliefs, primitive Judgments, and our intuitive moral Convictions. Part iii., on Intuitive Principles and the Sciences, comprises four more books, of which the first deals with Metaphysics and discusses the relation of Fundamental Truth to Evolution; the second, on Gnosiology, treats of the origin and limits of knowledge; the third, on Ontology, disposes of Idealism and Scepticism; and the last exhibits the metaphysical principles that are involved in the practical affairs of life, in Physics, in Mathematics, in Formal Logic, in Ethics and in Theology. Besides all this the reader will find in small type at the end of several chapters extensive notes historical and critical. Such an encyclopædia of philosophy cannot, of course, be reviewed in detail: it must suffice to consider the author's account of first principles and his treatment of one or two crucial problems.

Whilst the greater part of our knowledge, says Dr. McCosh, is got by induction, "there are Objects, there are Truths, that are perceived directly and immediately". The powers percipient of these objects and truths are called Intuitive, and the truths they discover are Primitive and Fundamental. "Our Intuitions look to Single Objects and not to abstract or general notions" (p. 7), not, for example, to an idea of Space or of Causation, but to a particular body in space, or to a particular effect, whence by a subsequent intellectual process the general ideas are formed. Intuitions imply laws or powers in the mind from which they proceed (p. 12); and such laws or latent principles act, as physical laws do, at all times, and whether we perceive them or not. Now *if we rightly generalise* our Intuitions we obtain in an explicit form, corresponding to the latent principles of our nature, philosophic principles, which may be either Axioms or Maxims, such as the axioms of Euclid and the Decalogue of Moses. Latent Principles, Intuitions, Philosophic Principles, these three are "only diverse aspects of the fundamental powers

of human intelligence. They constitute a philosophic trinity, three in one and one in three" (p. 14); or again (to modify in a peculiar manner an old image) they are "three sides of the shield".

It becomes therefore very desirable to determine the tests of Intuitive Truths; and Dr. McCosh finds that these are also three: first Self-Evidence, and (though of less value) secondly and thirdly, Necessity and Catholicity. But these three tests, it must be carefully observed, apply to Intuitions "only under the aspect of Perceptions" (p. 18). The latent principles are "not under the view of consciousness," and of course cannot be self-evident; and "a process of generalisation is implied in all axioms, and this process is not intuitive". We are thus brought to what is really the most serious question: How do we know when axioms have been rightly generalised? That having raised this question the author could possibly leave it unanswered never occurred to me. Page after page, chapter after chapter, book after book, part after part, I plodded on, eager but at last desperate, when on reaching the end I had to confess that if the volume contained any solution of its most important problem it had escaped my observation. Had some nefarious binder omitted the most precious sheet? No: the pagination was consecutive. On the whole it seems probable that this is Dr. McCosh's secret, which he is reluctant to reveal for fear of losing his monopoly in the manufacture of sound morals and metaphysics.

Let us, however, consider one or two of his results. At p. 68 Dr. McCosh takes up the question of the Independent Existence of Objects. "In our primitive cognitions," he says, "we know Objects as having an Existence Independent of the Contemplative Mind. We know the object as separate from ourselves. We do not create it when we perceive it, nor does it cease to exist because we cease to contemplate it." "All this is involved in our very cognition of the object, and he who would deny this is setting aside our very primitive knowledge." Again: "In our primitive cognition of body there is involved a knowledge of Outness or Externality. We know the object perceived, be it the organism or the object affecting the organism, as not in the mind, but out of the mind." Where then (one may ask) is the 'mind' that the object should be 'out of it'? 'That an object is out of the mind,' so far from being a primitive cognition, seems to me to be a contradiction in terms. At p. 74, criticising Ferrier's doctrine that the object of knowledge is always "object *plus* subject," Dr. McCosh says: "No doubt we always know self at the same time that we know an external object by sense-perception, but we know the external object as separate from and independent of self. We might as well deny that we know the object at all as deny that we know it to have an existence distinct from self." Now this last clause is true: we do know the object as *distinct* from self; but that is a very different thing from knowing it as

independent, separate and external. Indeed, it implies the opposite: to know the object as distinct is to know it as in relation to self, and, therefore, not separate, not independent, not external. But at p. 295 he has the most extraordinary Intuition ever registered; for he says that both by consciousness and perception "we know self and not-self as having an existence independent of the mind contemplating them". Such experiences are only to be had in the hypnotic state.

At p. 102, Dr. McCosh begins to give us his Intuitions about Power. "In all knowledge of substance there is involved knowledge of Power. We cannot know self, or the mind that knows, except as active, that is, exerting power or being affected. Nor can we know material objects except as exercising or suffering influence,—that is, a certain kind of power." This position is supported by no argument; we are to take the author's word for it. It is true that he afterwards gives some of Berkeley's objections to the doctrine (p. 108), but with no reasoned rejoinders: "Berkeley is wrong," he says. At p. 208 the same procedure serves for Causation: "There is Power in the Cause or Concause to produce the effect. We have seen that we know substances, mind and body, as having power." Then: "We see the error of Hume, who makes causation mere invariable antecedence and consequence; and of J. S. Mill, who makes it unconditional sequence. It is not the invariable or unconditional succession which constitutes causation, but it is the power in the Cause which produces the invariable succession." How many legions ought a man to have at his back when he ventures to write in this way?

The truth is that Dr. McCosh has, apparently, never understood the meaning of metaphysical analysis. That a vague irreflective belief in Externality or Power is not to be trusted, if on analysis we cannot find that such things are directly known, whilst we can show that the belief in them would have arisen even if the things have no existence—this argument, the burden of English metaphysics for two hundred years, which our author must have scanned on a thousand printed pages, seems never to have penetrated beyond his retina. Nay, in such a simple matter of logical analysis as the distinction between Real and Verbal propositions, though he is aware of it, and states it somewhat ostentatiously, yet he betrays no notion of its philosophic significance. He cites Real and Verbal propositions indiscriminately as examples of Primitive Judgments; and at p. 276, contrasting Axioms with Laws of Observation, he says: "The latter kind of laws may or may not hold good beyond the limits of experience". But "it is true over all our earth, and must be true in all other worlds as well as in this, that cruelty is a sin".

To do justice to Dr. McCosh's position in Morals and Metaphysics it is necessary, in conclusion, to signalise his method; which, though ancient enough, is hitherto unnamed and un-

acknowledged. We have all heard of the Dialectic Method, of the Empirical, the Sceptical, the Critical, and so forth. Now, our author's is the Assertory Method. It is indeed no new one: all philosophers have resorted to it when other methods failed them; but no one else has worked it so thoroughly and confidently. For others Assertion is a city of refuge, whither they betake themselves when persecuted elsewhere; for him it is an abiding city, where he dwells comfortably and securely, as in the shelter of a great rock, amidst this weary land of doubt and disputation.

CARVETH READ.

System der Philosophie. Von WILHELM WUNDT. Leipzig: W. Engelmann, 1889. Pp. x., 669.

Prof. Wundt's elaborate and imposing *System of Philosophy* contains in itself, in some sense, the results of his whole past work, both in the positive fields of inquiry with which his name is usually associated and in the more strictly philosophic field. Having already set forth the scientific basis of his thought and a part of the philosophical doctrine in which it has resulted, he now appears as a constructive thinker who seeks to develop that thought in its systematic completeness. The metaphysical, or ontological, part of philosophy, in his view, is its central part; and with this the sciences of nature as well as of mind are to be brought into relation, and thus constituted, as far as is possible, "philosophical sciences". The means of bringing them into this relation is to be found in the theory of knowledge as it has been worked out in modern times. Finally, the philosophic view of the world and of life is to satisfy "the needs of feeling" as well as "the demands of understanding".

From this general statement of his aim it may be seen that Prof. Wundt comes forward in his present work as a representative of "scientific philosophy," yet as one who would not limit the scope of philosophic thought to the service of science. Passages may indeed be found that seem to reduce philosophy to a kind of *ancilla scientiæ;* but on the whole the better conception of "scientific philosophy" is maintained which makes science the preliminary discipline and material, and philosophy the end. Perhaps science, viewed in this way, does not even get all its due influence. For, apart from his experimentalising, it cannot be said that Prof. Wundt is a thinker of an eminently positive cast. Beyond the region of experimental psychology he sometimes appears to renounce all scientific guidance—as in one at least of the "laws" formulated in his *Ethik.* Unless we look upon it as a sort of compensation to himself for the peculiar objectivity and exactitude of his work in physiological psychology, it seems most plausible to connect this feature of Prof. Wundt's philosophy with his neglect of English thought. That we need

expect no particular appreciation of English thought from Prof. Wundt was made clear enough by his *Ethik*, and it is equally clear in the *System*. At his first reference to the characteristics of English philosophy (pp. 17-18) he falls into self-contradiction. Referring to the praise that has been given to English Experientialism for being more circumspect in relation to science than Continental systems of metaphysics, determined, as these have usually been, by the form of some particular science to the exclusion of the rest, he remarks that this praise is not quite justified, for two reasons: (1) English experiential philosophy has been determined in a one-sided way by natural science, and has therefore a "naturalistic" character; (2) It has regarded as its chief problem the application of psychology to the theory of knowledge and to ethics, and is consequently in its most important results only "applied psychology". Yet Prof. Wundt himself recognises a fundamental division of the natural sciences from the sciences of mind (pp. 28-9). How then, on his own principle of division, can English philosophy be said to be determined in a one-sided way by natural science if its most important part consists in the application of mental science?

Prof. Wundt's work, however, is essentially constructive, not critical, and it is above all his systematic construction that we must try to estimate. It will be best to begin by a statement of what, in general principle, can be accepted almost without qualification. There is, first, his view of the relation between philosophy and science. Philosophy, he shows, can no longer pretend to develop everything from within itself,—to arrive at the results of special science *a priori*, for example,—but must start from knowledge as scientifically elaborated. Originally a general view of the whole of knowledge, from which the special sciences detached themselves and became independent, it must henceforth be a general view of the whole of knowledge, supported on the special sciences as a basis. Now as formerly special science occupies an intermediate position between philosophy and ordinary unscientific knowledge. The difference is that in working towards a general theory of the universe the thinker must now pass from science to philosophy, instead of, as formerly he was supposed in principle to do, from philosophy to science. Thus he will avoid that exclusive determination of his thought by the form of some predominant science which was inevitable so long as philosophy, after the constitution of the special sciences, tried in principle to maintain itself wholly independent.

This, as might be shown by comparison with the views of other scientific thinkers, is the general position to which the modern conception of scientific philosophy is tending. How it needs interpretation by recognition of the definitively idealistic character of modern philosophy, Prof. Wundt very well shows in many passages of his *System*. The nature of reality, as distin-

guished from the mode of its evolution, he points out, can only be determined on the ground of the mental sciences, not on the ground of the natural sciences. Not only the results of the natural sciences, but also the cosmological speculations of scientific philosophy, in order to acquire genuine philosophical significance, have to be brought into relation with an ontological doctrine based on the results of mental science. It cannot be said, indeed, that Prof. Wundt holds this idealistic view quite consistently. At p. 146, for example, he prefers Locke's theory of the external world to Berkeley's; remarking that Locke, when he placed the primary qualities of matter in the object, had the men of science on his side, whereas Berkeley's complete dismissal of "objectivity" was an act of subjective arbitrariness justified by nothing. This evidently detracts somewhat from the consistency of Prof. Wundt's idealism; and his theory of scientific knowledge is undoubtedly semi-realistic. It must be admitted, however, that when he comes to ontological speculation, idealism is at length consistently adopted. This is a great merit, even if nothing in Prof. Wundt's ontology should turn out to be acceptable but the general principle.

In treating of the method by which general philosophical conceptions are to be attained, Prof. Wundt again is not perfectly consistent with himself; but so far as he sets forth a consistent view of method the double objection may be taken that he makes philosophy neither sufficiently disinterested nor sufficiently practical. Philosophy, he holds, ought to satisfy both the understanding and the moral feelings. His way of providing satisfaction for both is to make ethics a purely theoretical science and to introduce practical postulates into metaphysics. The philosopher who treats of morals or law or religion is not to attempt to influence practice. His proper business is simply to comprehend. Any influence he may exercise on life must be indirect, through the special science which treats of his particular subject-matter. The speculations of the philosophy of law, for example, may come to influence practice by being taken up into the science of jurisprudence; the philosophy of religion may influence religious life by making suggestions that get incorporated with scientific theology—which, if it has not become, is now in process of becoming a special science like any other: but the philosophies of law and religion must renounce all attempt at direct guidance of common thought and practice. The business of the ethical philosopher, again, is not to lay down ethical rules, but to show how they arise. Philosophy gives satisfaction to the moral and religious feelings by explaining their origin and by placing them, theoretically, in relation to all the other interests of life. In metaphysics, on the other hand, beliefs required by ethical needs are to be asserted as postulates. Only with the aid of such postulates or "transcendent pre-suppositions" is a satisfactory doctrine of the "world-ground" attainable. Metaphysical

philosophy, Prof. Wundt insists, has always had for one of its problems to reconcile theoretical with practical interests. The beginning of philosophy, in its distinction from mythology, was no doubt marked by the separation of the intellectual from the religious interest. The religious interest, nevertheless, has always continued to be one of the motives of philosophising, just as the intellectual interest has had its share in determining the form of myths. Nearly all the great historical philosophies have a religious element; the exceptions being such systems as those of Democritus and Epicurus, whose theories, having given no satisfaction to the desire for reconciling purely theoretical with practical interests, but having regarded solely the need of intellectual explanation, were for long expelled from philosophy. Afterwards, by an appropriate act of historical justice, the atomic hypotheses of ancient materialism were renewed by special science with a view to those intellectual interests from which they first had their origin. For special science is really, as philosophy is not, purely intellectual.

To Prof. Wundt's theory of ethics it will be necessary to return. In this place some remarks may be offered on his view of method in metaphysics. The ground on which he would maintain his position appears to be this: Only special science and materialistic philosophy are purely intellectual in their outlook on the universe; but special science is not philosophy and materialism is an inadequate philosophy; if then we would be philosophical in the full sense of the term our outlook must not be purely intellectual. To this it may be replied that, while materialism is to a considerable extent entitled to the praise of having been disinterestedly intellectual, it is not the materialistic systems alone that are entitled to this praise. Spinoza's view of the universe is not less disinterested than that of the most consistent materialist. Indeed Spinozism has been taken to be the typical doctrine of purely speculative metaphysics uninfluenced by practical considerations. Prof. Wundt would object that in Spinoza's theoretical philosophy there is a "religious" element, that indeed the Spinozistic doctrine of substance had its origin in "religious" motives. He does not, however, make it very clear what precisely he takes this element or these motives to be. The point, when method is in question, is whether Spinoza's theoretical view of the laws of things was modified by hopes and fears. If not, then to call it religious is not to the point. Materialism, we may agree with Prof. Wundt, in spite of its merits is a truncated philosophy. But is not the idealistic criticism that proves it to be so as purely intellectual as anything can be? And is it not to this criticism that Prof. Wundt has finally to appeal in order to show the inadequacy of materialism? If it were not that materialism is shown to be inadequate by the theory of knowledge, his whole argument would be, of course, nothing but a *petitio principii*.

When Prof. Wundt proceeds to the actual building up of his system, however, it is not his doctrine of method that first makes itself felt. The first doctrine of which we perceive the influence is the author's characteristic theory of Apperception or Mental Attention. The question as to how far this theory is supported by experimental psychology is still pending, and an examination of the evidence for it need not be undertaken here. It will be sufficient if the direct application of it in the form of theories of logical thought and of the nature of moral action are considered on their merits. No injustice will be done to these theories by their separate examination; for Prof. Wundt's "apperception" means simply will, directed first internally, to mental states, and then externally, to muscular actions; external will being regarded as a derivative form of internal will. Whatever, then, may be decided as to the value of the principle of "apperception" in psychology generally and as to its use as a transcendent principle, the meaning of Prof. Wundt's theory of the nature of thought, for example, is clear enough. If thought can be shown to be essentially will, so far Prof. Wundt's contention is established, though apperception may not have all the scope he claims for it; if it cannot, then the principle is simply deprived of one particular application, but it is not shown to have no application at all.

Prof. Wundt's theory of the nature of Thought, set forth chiefly in the first section of his *System*, is that thought, as distinguished from association, is the bringing of representations into relation by the activity of self-conscious will, choosing in view of ends. In association also there is "relating," but here the relation appears as "given," not as voluntarily produced. While associations, as such, are always involuntary, acts of thought are always voluntary. The voluntary character of thought, however, only determines its general nature. All qualitative distinction among thought-processes, all whereon their special significance rests, is contained in the relations of representations that are at once the acts and the results of thought. Thought is decomposing activity, and proceeds according to a law of "dichotomy" or of "duality"; the original act of thought being a judgment ("Ur-theil," primitive division) which decomposes a total representation into two related members. Thought proceeds from wholes to parts, while association proceeds from parts to wholes (section vi., p. 573). With the development of the function of judging the formation of concepts runs parallel; these being formed out of the material of representations by the relating activity of judgment. The detachment of concepts from determinate single representations and the carrying of them over to others makes possible their symbolical designation by means of language. Because of the importance of language as the instrument of developed thought, it is necessary to base the investigation of the forms of thought on a view of the forms of its expression in language. Grammatical forms, indeed, are not exclusively results of logical think-

ing, but arise out of "mixed psychological and logical conditions". From these forms, however, we must try to arrive, by analysis and abstraction, at the fundamental forms of thought. Tracking out the forms of judgment, Prof. Wundt finds in the existence of the negative judgment the clearest confirmation of that "self-conscious will-nature" which is the internal characteristic of thought; the act of denial appearing to him to be essentially voluntary. The "apodictic judgment," again, is one that is voluntarily affirmed against doubt or denial. There is no sense in calling a judgment "necessary" when no one denies it. In the apparently exceptional case of the conclusion of a mathematical demonstration, which is expressly affirmed to be certain, though no one would think of denying it, the assertion of its necessity is equivalent to the assertion that adequate care has been taken in the process by which it has been arrived at (p. 65). Every form of thought may be called a "law of thought"; but all the various forms in which representations are connected admit of reduction to certain fundamental forms not reducible to one another. To these the name of "laws of thought" is more specially applicable. The fundamental relations to which all others admit of reduction are "identity" (total or partial) and "dependence". From the fundamental relation of identity spring the logical laws of Identity, Contradiction and Excluded Middle; from the relation of dependence the law of Reason and Consequent (*Grund und Folge*) or principle of Sufficient Reason (*Satz vom Grunde*). The principle of dependence becomes a "principle of the general union of our thought-processes," and so passes from a law of thought into a "law of knowledge".

Now is it not evident that Prof. Wundt's theory, at the crucial points, ends in quite unsustainable paradoxes? To answer this question, we have only to ask ourselves whether acts of thought are, as a matter of fact, always voluntary (*stets willkürlich*). Does not introspection make it perfectly clear that a real process of thought—say, a new argument or inference—often occurs quite involuntarily, while a process of mere association—say, the recalling of something to memory—needs voluntary attention? If this is so, then will, in the ordinary sense, cannot be the essence of thought in its distinction from mere association. But perhaps the most effective refutation of the theory may be found in what Prof. Wundt is obliged to maintain as regards the necessity of mathematical demonstrations. Can there be a more complete *reductio ad absurdum* of a theory of the nature of thought than that it requires us to admit that the Q.E.D. at the end of a demonstration of Euclid means—'For I have put forth all my will to connect the steps of this argument'?

On coming to consider what is said of the relation between thought and language, however, we find that Prof. Wundt's "*pro ratione voluntas*" theory, though not itself true, has at least the merit of suggesting by contrast the true theory. According to

Prof. Wundt, logical thought first exists, as a product of will, and then, in combination with other factors, creates symbolical language. Precisely by the inverse of this theory, the English Nominalists, beginning with Hobbes, have in effect solved the problem of the psychological nature of thought. The nominalistic solution is, that the essence of thought is to be general, and that generality is made possible by a system of particular signs, which constitutes language. Here the statement of the relation between language and thought gives immediate evidence of its truth by carrying with it the solution of the general problem as to the nature of thought itself. Thought is seen to have been created by articulate speech; as psychologically it remains inseparable from some kind of language. For Prof. Wundt, on the other hand, language has to thought from the first merely the external relation of an instrument.

An attempt may perhaps be made to rescue the theory of apperception by carrying back the inquiry to the origin of language. Prof. Wundt, for example, when he touches upon that question, says that language is the product of will (p. 402). If this could be proved true in any sense, it would not, of course, affect the nominalistic theory of thought; but the contention does not seem to be itself sustainable, whether in the form given to it in the *Physiologische Psychologie* or in the form now suggested. What is suggested by the references to language in the present work is that will directed by practical interests, rather than representation or feeling in their distinction from will, is the chief psychological factor in the development of speech. At most this may seem to have some application to the Chinese language, with its vocabulary of five hundred monosyllables made to express all meanings by changes of intonation and position. Given a modicum of original susceptibility and power of articulate response, "will" may here seem adequate to explain the rest. For the development of the higher languages (whether Aryan or Semitic) with their vocabularies composed of indefinitely varied sounds, the play of imagination and feeling would seem to have counted for more than mere will. And for the formation of the sounds even of Chinese something more than will would seem to have been necessary at the origin.

Before leaving the account given of thought we may draw attention to two points already noted in passing,—one a minor difficulty of Prof. Wundt's theory, the other a concession to Associationism. The concession is that the qualitative differences of thought-processes are to be explained not by the will, that is everywhere present in greater or less degree, but by the relations of ideas. The difficulty is that thought seems to be regarded as exclusively analytical. For the primitive judgment from which thought springs is said to be an act of mental division, and thought is said to proceed always from wholes to parts while association proceeds from parts to wholes. Is not this last dis-

tinction in reality a distinction between analytical and synthetical thought?

The validity of knowledge, the nature of scientific proof and the methods of scientific discovery are dealt with in sections ii. ("Knowledge"), iii. ("The Concepts of Understanding") and v. ("Chief Points of the Philosophy of Nature"). In principle little is arrived at beyond the distinction, drawn at the end of section i., between the three accepted laws of formal logic and a general "law of dependence" or of "reason and consequent," which is supposed to be adequate to the explanation of everything from the confines of formal logic to experimental science, taking in all that is special to mathematical reasoning. That is to say, in material logic, so far as general principle is concerned, Prof. Wundt is content to remain at the stage reached by Leibniz when he formulated his law of "sufficient reason". Several steps in advance having been taken by the theory of material logic since then, Prof. Wundt's treatment necessarily seems inadequate, in spite of all its elaboration.

The most interesting discussion of a question of logical principle is that of the relative rank of the laws of "causality" and of "conservation". So far as the validity of these laws is concerned, Prof. Wundt is content with bringing them under the law of "reason and consequent"; but apart from the general question of their certainty and its grounds, there is the question which of the two is to be placed before the other. This is argued historically and otherwise, with the result that the highest place is given to the law of causation. In the course of the discussion the obligations of science to philosophy for its ultimate hypotheses are very well shown. It is pointed out that not one of the general ideas as to the constitution of matter which regulate special research has had its origin in special research itself (p. 281). Atomic doctrines and doctrines of the perdurability of matter and force, we are reminded here and elsewhere, first appeared as philosophical theories, not as results of scientific experiment and observation. In arguing the question between conservation and causality, Prof. Wundt contends that the conception of "substance," with the advance of science, becomes more and more subordinate to that of causality. Natural science, indeed, cannot wholly dispense with it, but from mental science it will soon have disappeared altogether. The notion of a substantial soul, derived from the notion of material substance, has been found to be of no service in psychology, which, in proportion as it becomes scientific, replaces the conception of the soul and its powers by the conception of a series of mental occurrences causally connected. Mental occurrence being ultimately that to which all else is reducible by the theory of knowledge, the conception of causality thus stands forth superior to the conception of substance. In mental science the law of causation takes a special form; a "principle of non-equivalence" having to

be substituted for the principle of equivalence of cause and effect to which the changes of the material world conform: but this does not affect the conclusion that the law of causality, in its general sense, is to be recognised as the higher principle. Even in physical science, considered by itself, Cause is now above Substance as Substance was formerly above Cause; for the conception now dominant in physical science is that of Substantial Causality, in which the conception of substance is auxiliary, merely guaranteeing a certain perdurability that has to be assumed when the changes of matter and energy are in question. The highest scientific principle is that of Actual Causality, or the causality of actual occurrences, physical or mental, without reference to substance. Applied to mental occurrences—by which in the end we have to explain the origin of the idea of substance itself—the conception of Actual Causality becomes an ontological principle.

This argument, taken as a connected whole, appears to be contestable at two points: first, as regards the view of the relations between the ideas of permanence and change in science; secondly, as regards the application to ontology of the modern criticism of the idea of substance. As a matter of fact, it would not be universally admitted that in science the notion of a permanent ground of occurrences has either suffered most from sceptical criticism, or tended to be displaced by the notion of a sequence of causes and effects. On the contrary, it has been thought that the notion of something that remains identical through change, when it acquired the precise form of the laws of the conservation of matter and energy, made possible a better formulation of the ultimate axiom of scientific truth than could be attained when, scientifically, the conception of cause was predominant. And there can be no doubt that the idea of conservation, in its complete expression, gained acceptance later in physical science than the idea of cause, though as a philosophical conception the notion of the permanence of substance was earlier. Prof. Wundt's procedure really amounts to using the sceptical criticism of the metaphysical notion of substance to discredit (or at least to depress) the scientific notion of permanence, while taking the idea of cause (at least in physical science) in the best form to which it has been brought by logicians. That the idea of a causally connected series of events is alone applicable in psychology, while the idea of permanence has its scientific application only in the realm of physical event, does not prove that the causal conception brings us nearer the ideal of scientific explanation, but rather the contrary. It is a familiar remark that the sciences of which the subject-matter is highest and most complex are not the most developed sciences. Again, though the dogmatic assumption of substance as the substratum of phenomena is no longer admissible in metaphysics, we still need some term to describe reality, in the philosophical sense, as distinguished from that which is not in the philosophical sense

real. Whatever term we accept, the question must be put, Is this reality momentary or permanent? This question Prof. Wundt puts in his own way when he comes to deal with ontology. He decides for a kind of Heraclitean view; the momentary existences he conceives as causally connected in the flux of events being thought of, in accordance with the idealistic theory of knowledge, as purely mental. There is, however, an Eleatic view—as Prof. Wundt seems to recognise in some places—that might be opposed to this without any restoration of that idea of substance which modern criticism has expelled. The merely "causal" view, it might be allowed, has a certain truth of its own; but we get nearer to the ideal of complete explanation by supposing an unchanging whole, variously determined according to the relations of its elements,—which are to be thought of simply as related elements in a whole; the assertion of their separate existence being a mere abstraction. The only elements that we can use in our metaphysical construction are, of course (just as in Prof. Wundt's view), those that are arrived at by analysis of mind. This doctrine being just as compatible as his own with idealism and with the modern criticism of the dogmatic conception of substance, it follows that Prof. Wundt has not proved in ontology, any more than in phenomenal science, that the idea of temporal connexion stands above the idea of permanence.

Prof. Wundt's Heraclitean doctrine, expounded at the end of section iv. ("The Transcendent Ideas"), is rather curiously combined, as will be seen, with a doctrine of a permanent "world-ground". The genuine idealism of his ontological speculations, again, is preceded and followed by expositions of a complex and peculiar realism, of which it is not easy to give a consistent account. The main points of this doctrine seem to be (1) the distinction of will, as the true reality of the soul, from "presentation," as something objective that is an obstacle to the will, and (2) the position that, since our knowledge of the external world is "conceptual," and not "intuitive" (like our knowledge of internal states), external things must have an objective and purely "conceptual" reality. In support of the distinction between will and presentation we are told that the "Ego thought of as isolated from objects that hinder its activity is our volition (*Wollen*). There is absolutely nothing outside man or in him which he can call wholly and entirely his own except his will" (pp. 386-7). This is, of course, one statement of Prof. Wundt's theory of apperception. For those who reject that theory, his attempted philosophical distinction between subject and object falls to the ground. As regards the second position, it is necessary to ask what is meant by our having a conceptual knowledge of things. Does the philosophical meaning of our conceptions of things lie in the possibility of their experiential verification, or does it consist in correspondence to a real world of concepts out-

side all minds? Unless Prof. Wundt takes the latter view, the conceptual character of our knowledge of objects cannot save him from Berkeleyan idealism.

In order to reach his final ontological doctrine, of which a fuller account must now be given, Prof. Wundt adopts the Kantian distinction between "understanding" and "reason" as marking the distinction between the problems of science and the "transcendent problems" of cosmology, psychology (or theory of the nature of the soul) and ontology. The essential character of reason he finds to be an incessant movement of the mind from what is scientifically known to theories of the whole on one side and of its elements on the other. Results of this movement in cosmology are the ideas of space and time as infinite, and of scientific hypotheses relating to the material constitution of the world as capable of indefinite progress. The first result gives us a "real," the second an "imaginary," transcendence. Real transcendence comes from the effort to connect everything according to the law of reason and consequent, applied to the form of experience; imaginary transcendence from a similar effort applied to its content. The "psychological *regressus*," it need hardly be said, leads Prof. Wundt to the doctrine of apperception. The theory of the individual soul, he then finds, in whatever way the psychological problem may have been solved, points directly to an ontological completion. And even if it did not, we should still be carried forward to ontology by the necessity of bringing our psychological into relation with our cosmological theory. Historically, it was the problem of the relation of mind and body that especially gave origin to the search for a doctrine of the unity of all being. Of the possible solutions, that only is found to be satisfactory which makes the material end in the spiritual *regressus*. Ontologically, elementary acts of will are, accordingly, the ultimate constituents of the world. These are not "active substances," but "substance-producing activities". Representations, it is suggested, may arise from the interactions of different wills. The final ontological idea of unity is that of an ultimate ground of the moral ideal of humanity, and at the same time of all being and becoming, in so far as from the point of view of the ideal we see in this being and becoming the means to the ideal as an end (p. 438).

Nature is unintelligible, except in relation to spirit, and is to be conceived as its preliminary stage; organic life being immediately preliminary to that spiritual life for the sake of which nature exists. The organism is a result of the past development of spiritual energy,—that is, of will,—and a basis for its future development. The will of the individual personality may be conceived, metaphysically, as composed of momentary and infinitesimal wills. It has immediately subordinate to it wills corresponding to the lower nervous centres, and it enters into a will of higher order, *viz.*, the will of the community.

This, though not conscious outside the individual wills of which it is composed, is as real as the individual will, or rather much more real because incomparably more powerful. When we reach the realm of spirit, properly so-called, the "law of equivalence of cause and effect" gives place to a law of "non-equivalence". This finds expression in the laws—so prominent in the author's *Ethik*—of "indefinite increase of spiritual energy" and of "heterogony of ends". Both these laws Prof. Wundt declares to be scientifically established by the psychology of communities and by history; though he admits that sometimes they appear at first sight inapplicable. In those cases we have to fill up the gaps in the evidence by "transcendent pre-suppositions". To make our view of nature consistently teleological we need the "pre-supposition" of an indefinite progress of mankind, having for its ideal limit (as is now explained) the formation of a common will of the whole human race. Now, if the "world-ground" is adequate to the attainment of this end, it is adequate to more than this. We cannot set up as an absolute limit the "practical ideal" of humanity. Progress towards this is only infinite relatively to us, not in itself. We must go on, therefore, to affirm progress beyond every assigned limit. The "transcendent ground" of the end to be attained by humanity is, therefore, to be supposed adequate to infinite progress, of which human history is only a single stage. Thus the ethical passes into a religious view of the world.

We have here arrived at the verge of Prof. Wundt's statement of the principles of ethics and of the philosophy of history, set forth in section vi. ("Outlines of the Philosophy of Spirit") as a further development of the general metaphysical doctrine of section iv. Progress, as we see, is the last word of his metaphysical doctrine, and is finally "postulated" on ethical and religious grounds. Yet the author does not renounce all attempt at scientific proof of his theses. In particular, he seeks to establish an "objective teleology" in nature by means of scientific and especially biological considerations. His general theory of organic life is wholly Lamarckian (though he would not accept that description); regarding instincts, for example, as the "mechanisation" of past voluntary actions, and seeking to explain organic modifications as the result of use and disuse with inheritance of acquired characters. It is less on this theory, however, that he seeks to base his teleological view than on the doctrine of natural selection—of which, in his specially biological chapter (section v., ch. 4), he hardly says anything beyond remarking that it does not explain variation (pp. 522-3). The Darwinian theory, he holds, is teleological because it conceives animals as perfecting themselves by putting forth will in the active struggle for existence. The conception of the struggle for existence contains the thought that in living beings "will-forces" become free which interfere in the course of nature so as to

determine events; the organism itself becoming modified through the reactions of these forces (pp. 328-331). As Prof. Wundt lays much stress on this argument, it will not be unfair to test his teleological doctrine by an examination of it. The objection to it from the Darwinian point of view is obvious. The powers of animals may be developed, as Prof. Wundt says, by means of the active struggle for existence; but, according to the Darwinian view, it need not be by any direct influence in calling forth the powers of individual organisms that the struggle for existence acts. If there were complete incapability of individual modification, except by a purely intrinsic process of development of innate powers from the germ, there would still be "natural selection". The organisms which by this intrinsic process came to be adapted to circumstances would be "selected," and the others eliminated. And if we suppose direct modification of some organisms by the putting forth of active powers called into existence by the struggle, the selection of the organisms modified by this process is simply one kind of natural selection among others. When any particular organisms have the power of perfecting themselves by active struggle, and when this is the kind of struggle that is taking place, those particular organisms survive. For "Darwinism" that is the whole statement. If properties acquired in the active struggle are transmitted, as well as the intrinsic properties that qualify for it, this is a fact in support of "Lamarckism". Obviously the Darwinian theory involves no teleological relation of any kind between the struggle for existence and the production of organisms that can actively adapt themselves. Teleology may not be disproved by the theory of natural selection; but it is certainly not established.

In the absence of more convincing arguments for the "objective teleology" of nature, we are driven back on Prof. Wundt's "transcendent pre-suppositions". We are also driven back on these pre-suppositions in the spiritual sphere. For nothing definite is offered in the way of scientific evidence to support the "laws" by which Prof. Wundt seeks to formulate spiritual evolution. The "law of the heterogony of ends," indeed—though affirmation of it as the law of all social action seems a little incongruous with insistence on the factor of conscious will in the development of the lower forms of organic life,—may be admitted, even in the shape given to it in Prof. Wundt's *Ethik*, to be the expression of a partial truth. The attainment of one kind of end no doubt frequently leads to the attainment of ends unforeseen at first, and different in kind. This difference of kind Prof. Wundt now seems disposed to drop. In his present work he would apparently confine the "law of heterogony" to cases where the new ends, though not actually foreseen, are "in the same direction as" the original end. Such cases also, no doubt, frequently occur. Neither expression of "heterogony," however, seems to have any title to the name of a scientific law. For

both alike are statements of what occurs sometimes (not always) in human life, unaccompanied by any statement of the conditions of its occurrence. An expression with more claim to be regarded as a true generalisation is Mr. Spencer's law of the "multiplication of effects," which seems to include both forms of "heterogony". The later form of the "law of heterogony," we may admit, has not the disadvantage of the earlier, that while put forward as a positive ground for action, it is rather a consideration that limits the scope of rational ethics; but, on the other hand, it is the expression of a less interesting social fact. Prof. Wundt's formula of the "indefinite increase of spiritual energy" no one, of course, can be expected to admit without further definitions and explanations. This and the "law of heterogony" being left aside as at least not yet acceptable in the form that is given to them, we may, nevertheless, obtain a certain common ground for the discussion of Prof. Wundt's ethics by putting the result in this way: that he asserts the universal existence of "progress" in some sense, and that, while appealing to scientific evidence for the proof, he still finds it necessary to fill up the gaps in this evidence by "transcendent pre-suppositions". Not having found any scientific evidence for his teleology, we are compelled to take the "pre-suppositions" as the ground of his whole doctrine of evolution, cosmical, biological and spiritual. What, then, is the type of ethical theory that results from these "pre-suppositions"?

The basis of ethics, as now stated by Prof. Wundt, is the notion of the mind of the community and of its historical development. The community in its highest form, he shows, is in some sense both an "organism" and a "personality". The conception of it as a "personality" requires not only that the collective organism should be capable of unitary expressions of will, but also that it should be unconditionally autonomous. An individual may be a member of many communities, each with a collective will; but there is only one that the individual can recognise as unconditionally superior, and it is only this that has the marks of the true "collective organism" and "collective personality". The community to which these marks now belong is the "national state". The ultimate practical ideal for man is the union of humanity into a single ethical organism, or community of wills, excluding all dissentience of aims. This ideal may never be actually attained, but it is to be postulated as the end of evolution so far as man is concerned. The meaning of history as a collective movement does not consist in its mere relation to the happiness or perfection of individual men. Historical facts are "objective spiritual values," apart from any relation to individuals. So with all expressions of the collective will. When the reality of the collective will is recognised, an independent "content" must be ascribed to it, in agreement with the historical judgment which estimates the significance of

a people not by what it has been for the individuals who have belonged to it, but by what it has been first as a whole for itself and then for humanity (p. 636). Those actions are moral in the objective sense that promote the "free energising of spiritual forces". The ethical worth of a man, however, is to be estimated not by the objective "good" which he produces, but by his disposition; and the feeling of happiness, though not the end of spiritual goods, may serve as a kind of test of their presence.

The exposition of this historical and ethical doctrine is accompanied by a polemic against "the individualism of the *Aufklärung*". According to Prof. Wundt, the "individualistic" doctrine of the soul, that is, the doctrine of the soul as a kind of atomic "substance," led to "ethical individualism,"—by which he means egoism. Now that the mind or will of the community is known to be equally real with the individual mind or will, ethical individualism is superseded. Historical events and social institutions, therefore, are no longer to be viewed simply in relation to the good of individuals, whether ourselves or others. The ethical good is now conceived as "objective," or having reference to the whole, not as merely "subjective," or having reference to the individual.

Against this it may be urged both that the doctrine of the soul as an atomic substance was not specially characteristic of the *Aufklärung*, and that the *Aufklärung* was not, on the whole, egoistic. Nor is there any logical connexion between theoretical egoism and the "individualistic" doctrine of the soul. To regard the soul as a "psychical atom" is obviously not in the least inconsistent with the assertion that there is sympathy among individuals so far as they recognise one another as of like nature. It is true that the *Aufklärung* held an "individualistic" doctrine that has been superseded; but this was not the atomic doctrine of the soul, but the theory that explains society as the result of a conscious union of individuals at first separate, instead of taking the coexistence of men in society as a basis for its psychological account of the individual man. This individualism is consistent with, and has been associated with, quite opposite views as to the nature of the soul. Spinoza's view of the soul as a determination of the *intellectus infinitus* (which Prof. Wundt discusses, but not in relation to this point) did not prevent him from being an "individualist" in his social theory. On the other side, this type of social theory does not prevent either the recognition of the supremacy of the will of the community over the actions of individuals or the recognition of the State as an object of devotion superior to all private aims. Historically, the conception of the autonomous State as the supreme "collective organism" received adequate expression long before the modern psychological advance in the theory of the relations between man and society. And, in the end, there is an "individualism" that is not touched by this advance.

The social mind, after all, only arrives at consciousness in the individual mind. A necessary deduction from this is that social institutions and historical movements must be estimated by the kind of individual life that results from them,—which is precisely the "individualism" that Prof. Wundt desires to invalidate.

His procedure—beyond the historical argument given above—consists partly in an application of the doctrine of apperception to the relations between the individual mind and the mind of the community, partly in what we may venture to call a negation of the ethical judgment in history. The mind of the community being regarded, in accordance with the doctrine of apperception, simply as "collective will," this is brought into comparison with the individual will and found to be more powerful. The individual will, then, it is said, must subordinate itself to the social will. No doubt this is true in the sense that in case of conflict the declared will of the community is supreme. And when the individual and the social mind are conceived simply as "will," this doubtless exhausts the whole case. But let us suppose—as Hobbes, for example, supposed—that the individual and the community have a reason which is not simply will and which is capable of directing action. In that case the individual reason can put before the ruling power considerations for or against any mode of action, and these can be accepted or rejected on rational grounds; the criterion being, when the ultimate philosophical view is taken, the kind of individual life that the State ought to promote or hinder. Thus the distinction of reason from will makes it conceivable how philosophy can have a practical influence. According to Prof. Wundt, on the other hand,—and this is consistent with his doctrine of apperception,—all that philosophy can do is to wait till the will of the community has effected something, and then to treat this, for purposes of edification and contemplation, as an "objective spiritual value". In short, Prof. Wundt's "owl of Minerva," like Hegel's, does not set forth till twilight. For Prof. Wundt also "the real is the rational". His "transcendent presuppositions" require not only that social institutions should have a value in themselves apart from any relation to individuals, but also that social movements should have this value; for these, by the ethical postulate that the movement of history is continually progressive, are all parts of "progress". Thus not only the element of stability in social life but also the element of change (quite in the spirit of the Hegelian dictum, as it is fair to concede to its defenders) is raised above all "individualistic" criticism. What is excluded is not precisely change, but change and conservation alike, when either is defensible by the individual reason; for the exercise of this in any particular case implies that "the real," whether in the form of custom or of obscure social impulse, may not be "the rational". Criticism of institutions or of movements in relation to the life of individuals, if the conclusion is for change, is an uprising against an existing

"spiritual value," if the conclusion is in favour of what exists, an uprising against progress. And we must not suppose that we have got a criterion in Prof. Wundt's "free unfolding of energies". For every kind of social action without distinction is in some sense a free unfolding of the energies of the community. An example of a real criterion is Spinoza's declaration that the end of the State is freedom; for Spinoza meant personal freedom, which is attained or not attained according to the measures taken, and can therefore serve as a test by which to distinguish good from bad States. Prof. Wundt's "free unfolding," so far as can be learnt from his book, simply means endless social movement, as historically determined everywhere; whatever forms part of "history" being regarded as above criticism. In Prof. Wundt's doctrine, that is to say, there is for the State no criterion of action. For the individual, whether in the past or in the future, the "objective" criterion is simply success or failure in getting into the predominant social movement.

This doctrine is certainly not a necessary result of the introduction of ethical "postulates" into metaphysics; and it is a doctrine that has appeared independently of any ostensible use of "transcendent pre-suppositions". In Prof. Wundt's philosophical system, however, there seems to be an unmistakable logical connexion between the postulation of universal progress, on grounds that are regarded as ethical, and the denial of every practical criterion but the "real". Want of disinterestedness in the theoretical outlook has here led to denial of the practical bearing of philosophy. Those who have believed or disbelieved in progress on empirical grounds—the historical "optimists" and "pessimists" for whom Prof. Wundt expresses equal contempt—have at least asserted something more than a tautology when they have asserted that progress exists or does not exist; for they have compared events with their practical ideal and then tried to sum up the results of the comparison; and they leave a certain independence to philosophical ethics. Prof. Wundt and those who agree with him, having made their "transcendent pre-suppositions" as to the "world-process," are prevented from making anything more than a verbal assertion of progress; for whatever the movement of history may be they are resolved to interpret it as progressive; and they leave no independence to the ethical ideal. In support of their view, they of course appeal to "the judgment of history". This, they say, determines for us the objective ethical character of actions. If they are right, however, the judgment to which they appeal ought to be simply the record of historical success or failure. But is this what is usually meant by the judgment of history? Obviously it is not. Instead of being a tribunal that is above ethics, the historical record is implicitly ethical because it is not simply a record of facts, but is also a consensus of opinion, summing up more or less effectively the moral judgment of mankind; and this opinion has not been

wholly determined by success or failure. Prof. Wundt's type of thinking reverses the procedure of the historians who have contributed to form the consensus of moral judgment on historical events and personages, and tries to get "objective" moral judgments out of the course of events, assumed to take place in agreement with the requirements of a moral ideal. These objective judgments are then to be imposed on men in general, and on the moral philosopher in particular, to whom is assigned the duty of finding satisfaction for the emotions by arranging facts so as to agree with pre-suppositions. An ideal for the sake of which a predominant movement may have to be opposed is rendered altogether inconceivable. Thus the affirmation of universal progress as a moral postulate has led to the paradoxical result of the negation of the ethical judgment not only in history but finally in ethics itself.

THOMAS WHITTAKER.

L'Automatisme psychologique: Essai de Psychologie expérimentale sur les Formes inférieures de l'Activité humaine. Par PIERRE JANET, Ancien élève de l'Ecole normale supérieure, Professeur agrégé de Philosophie au Lycée du Havre, Docteur ès Lettres. Paris: F. Alcan, 1889. Pp. 496.

Closer examination confirms a first impression (MIND No. 56, p. 598) of the special importance of this book. Among the recent productions of the younger French psychological school, it has features of its own that arrest attention. Nothing has of late been more remarkable than the great increase of psychological activity in France. With the *Revue Philosophique* there at hand, in monthly issue, to stimulate as well as welcome new investigation, a large number of more or less well-trained workers have thrown themselves upon particular problems of psychology, and have obtained results of no small interest and promise. While in other countries, where *positive* psychological inquiry is being pursued (as not yet in England) by an active professional class, the endeavour at present is rather to get more exact results upon the beaten lines of psychophysics, in France there has been a singular eagerness to break new ground for psychology on the field of abnormal mental experience—chiefly that state of hypnotic trance which lends itself so readily to the conditions of scientific experiment. In saying France, Belgium is not to be forgotten, with Prof. Delboeuf so much to the front; nor is it meant that in other countries (England this time not excepted) effective part has not been taken in hypnotic research. Still in France, as there, for whatever reason, hypnotic 'subjects' appear to abound in exceptional number and variety, so a larger body of trained and capable investigators has started up to turn the multitude of new, or at least newly ascertained, facts to psychological account. MM.

Beaunis, Binet, Féré, Richet, are some of those that have of late been most active in the work of positive research as well as of interpretation; and now by his present volume, which sums up and brings to a head the independent investigation of some years past, Prof. Pierre Janet of Havre (not to be confounded with the well-known Prof. Paul Janet of Paris) takes rank among the foremost of those who are pressing on to issues of remarkable enough import.

There is the more reason not to delay giving some account of the volume, as it happens that, in the present No. of MIND, M. Binet deals at first hand with the same question of double (or plural) consciousness upon which Prof. Janet's researches converge. The question, however, is one that otherwise might well have engaged attention earlier. Though first raised in its present form by Dr. Azam of Bordeaux in his report on the now famous case of Félida X. (see MIND i. 414, 453), it has of late years forced itself also upon independent inquirers in this country. The lamented Edmund Gurney was led in the course of his hypnotic experiments (the more positive results of which were first recorded in MIND, see especially ix. 110, 477) to speculate, in *Proceedings of the Society for Psychical Research*, pt. xi., as to the bearing of his discovery of extremely involved alternations of conscious life on personal identity; and, again in the same *Proceedings*, Mr. F. W. H. Myers has obtained results from study of automatic writing that come still more directly into comparison with those of Prof. Janet and others in France. It was, any way, high time that psychologists of the older tradition should begin to reckon with the new class of facts. If the attempt is now made first with the work of a foreigner like Prof. Janet, this is because of its more systematic character. Strenuously as it has been conducted, the work of the English inquirers remains so far at a lower stage of psychological elaboration.

The title of Prof. Janet's book does not of itself lead us off familiar ground. Ever since it began to be at all understood how the nervous system was involved with mental action, it became a definite question whether bodily acts that seemed only less complex than those called voluntary had like these also a psychological character. Already in the middle of last century, Hartley quite accurately marked off 'automatic' from voluntary acts, and among the automatic distinguished between primary and secondary. Now, as secondary-automatic acts are such as begin by being voluntary for the individual, these obviously cannot be wholly divested of psychological character; yet, as automatic, they as obviously are related to those other (complex) activities which the individual never had to learn. There is no need, for the present purpose, to complicate the statement by referring to the change of border-line between the primary-automatic and the secondary-automatic introduced from the

evolutionist point of view. However the line be drawn between them for the individual, or between the automatic and the voluntary, the question remains whether the automatic are to be held as related to the voluntary upon the physiological side only or also as phenomena of subjective import. It is a question that was rather hotly debated in this country some twenty years ago. On the one hand, the physiological relationship was by some brought so strongly into relief that it was argued as if physiology, which seemed to give a sufficient account of automatic action, could give the only scientific account of conscious action also; consciousness (when present) being represented as a mere accident or 'epiphenomenon,' interesting enough, no doubt, in a way, but without real significance. On the other hand, it was contended, with more or less consistency (or inconsistency), that, as consciousness could never rightly be so regarded, scientific analogy required that subjectivity in some form or degree should be predicated of all those 'automatic' physiological acts which stood obviously related to the more complex cerebral acts called (from the subjective point of view) voluntary or conscious. On both sides, though some reference was made to particular facts of experience, the discussion was essentially speculative, and in this respect did not differ much from the kind of general argument which, long earlier, Leibniz had urged in favour of a subconscious or unconscious mental life. Now it is here that Prof. Janet makes a distinct advance with his "psychological automatism". While ranging himself on the side of those who refuse to take consciousness as commensurate with mind, he arrives at the position by a line of strictly experimental inquiry.

The "automatism" with which he is able so definitely to experiment is, indeed, peculiar. It is not any action that is referable to lower centres in the nervous system (from the basal ganglia downwards), such as in earlier controversy has chiefly been considered. The motor response which Prof. Janet evokes in his 'subjects,' and which, in spite of their not being consciously aware of it while it proceeds—or, to speak more strictly (since he wavers in his use of the word "consciously"), in spite of their not remembering it after it is over—he yet claims as properly "psychological," is called forth by impressions that must be supposed to reach their appropriate 'centres' in the cerebral cortex. The automatism of the case lies, for him, in a dissociation from the general stream of conscious experience and activity that makes up the normal personality of the individual. Three abnormal conditions, related but different, are found in that class of hysterical patients to which (aided, in the happiest and most effective way, by two practising physicians, Drs. Gibert and Powilewicz) he has in the main confined his inquiry. The first is the *cataleptic*, the psychological significance of which lies in the extreme simplicity of the phenomena presented. In cata-

lepsy (whether natural or induced), the 'subject,' otherwise unconscious, responds with specific movements to specific sensory impressions (or imposed emotional attitudes); thus manifesting, according to Prof. Janet, under strict experimental conditions, the true elementary mode of mental action, which Condillac vainly sought with his supposition of the marble statue endowed with first one and then another kind of passive sense-experience. The *hypnotic* state (proper) comes second, representing for Prof. Janet the next higher stage of mental complication; in which the motor response—so much more complex than in catalepsy that the 'subject' might appear quite normal to an outsider—depends no longer on mere sense-impressions, but on images involving (with or apart from direct sense-impressions) the whole mechanism of memory. And from this, as Prof. Janet contends, is further to be distinguished a third state, that may be called the *suggested;* in which, with no other modification of normal consciousness beyond a certain narrowing, the 'subject' is automatically determined to specific action by direct percept and most of all by the spoken word,—though here, as already in the hypnotic state, the act, as it grows more complex, is found less certainly to follow. Now a 'subject' may be wholly possessed for the time being with some one of these states, or, as Prof. Janet finds, the characteristics of one or other of them may appear concurrently with the normal consciousness of the individual (such as that may happen to be). Hence a division of his whole treatise under the two main heads of (1) "Total Automatism," (2) "Partial Automatism".

Chief psychological interest, at least as regards the question of plural consciousness, attaches to Prof. Janet's "Partial Automatism," but also, in the first division of his work, he brings into view many facts of striking significance, and discusses them with no ordinary insight. Of the truth of his initial position (supposing the facts to be all, as they seem to be, most carefully ascertained) there can be no question: it is in such isolated instances of movement following straight upon impression as catalepsy presents, and not in any bare sense-impression by itself, that we must look for the mental unit. What is practically the same truth had already, for a considerable time back, been accepted by psychologists, chiefly through demonstration, from the physiological point of view, that reflex action is the type of all nerve-process up to the highest; but, none the less, it is a very desirable and effective verification that is supplied by Prof. Janet's *psychological* study of cataleptic patients. Still more remarkable is his detailed treatment of Hypnotism. Chaps. ii., iii., on "Forgetting and Plurality of Successive Psychological Existences" (pp. 67-138), and on "Suggestion and Narrowing of the Field of Consciousness" (pp. 141-220), are a weighty contribution to the understanding of a subject which, if it has now fairly established its claim to the serious scientific regard withheld

from it (through prejudice) at an earlier time, is, so far, anything but matter of scientific agreement. On the main questions now at issue among contending theorists, Prof. Janet has been led, by his own observations, to some rather decided conclusions. Without subscribing to the details of the Salpêtrière doctrine, he yet holds with this, rather than with the opposite doctrine of the Nancy school and others (like Gurney and Prof. Delboeuf), on the point of the essentially abnormal, to the extent of morbid, character of the hypnotic state. He puts it, indeed, only in the form that there must be some "psychological disaggregation" before a person will pass naturally or can be thrown into the condition of hypnotism, but on the point itself his experience, so far as it has gone, leaves him pretty confident (p. 451). This, however, is one of his later conclusions, not brought into view while he is still at the stage of "Total Automatism". Here his main concern is to seize the truly distinctive feature of the hypnotic state, and this he finds to be a certain more or less complex modification of the function of memory. The hypnotic 'subject' (1) in reverting to the normal condition has no memory of what went on in trance, but (2) recovers such memory on going into the trance again. Exceptions to the universality of (1), as urged especially by Prof. Delboeuf (cp. MIND xiv. 470), are rejected by Prof. Janet as apparent only. He has himself still another mark to add, though less constant, (3) that the 'subject' in trance remembers what has gone on in the normal state. The facts as to memory have been noted before, by no one, as he recognises, more impressively than by Gurney. What is peculiar to Prof. Janet is his insistence on them as constituting the whole specific difference of the state. Not that he would deny other modifications of the 'subject's' conscious life, especially when the state is profound; but, short of this, the break of memory on reversion to the normal state, with resumption of memory when the normal state is again in abeyance, is for him proof all-sufficient that the (normally) forgotten condition of conscious life was hypnotic proper. And, in so saying, it is not only the various physical signs relied upon by some that he rejects as indistinctive. He not less confidently waives aside the loss of independent volition, which is commonly taken as the characteristic and, in a practical point of view, critically important psychological note of hypnotic trance. For it is here that his other position is declared. There is a state in which 'subjects' are found to act (at least within limits) as if they had no will of their own; but, according to Prof. Janet, it is not hypnotism. While hypnotics may be found unsuggestible, there are suggestibles who cannot be hypnotised. And if "suggestibility" thus fails as the test of hypnotism, it is a state that itself equally stands in need of explanation. Prof. Janet's account of it is that it is not found except where there is evidence of marked narrowing of the whole conscious field. This

may result from "distraction" or what not—the limitation is for Prof. Janet the essential condition upon which the automatism of response, to verbal command or other imposed *percept*, depends. The state, in fact, as he urges, resembles the normal consciousness of children (or, as he might have added, the mental condition of lower animals), of which, with manifest limitation of general range, impulsive action is the most salient feature. It is only the matter of causation that Prof. Janet fails to prove in the case—that child or suggestible adult is irresistibly impelled to act *because* of the absence or reduced number of other conscious modifications at the time. At least, of people in general, it can hardly be said that their pliability from without is in proportion to their narrowness of mental view, when dogged persistence of aim is found so often to accompany this. (And, perhaps, the use of the word 'dogged' might suggest doubt as to the sufficiency of the explanation for the lower animals either.) Nevertheless, Prof. Janet's arguments are not to be lightly passed by; but all that he urges must be well considered for any satisfactory theory that may yet be devised to cover all the facts of hypnotism. For, if he does not rest content with the suggestion-theory that has so far gained the upper hand, he yet does not deny or ignore any of the psychological facts upon which it is based. Nor is it in any resort to a mystic supposition of physical influence—but, on the contrary, in a stedfast adherence to the ground of psychological experience—that he looks for a solution of the differences of view that as yet so sharply divide hypnotic inquirers.

The general outcome of the prior study of "Total Automatism" is that, while down to the lowest of the three states noted and discussed there is psychological (not mere physiological) process going forward, the result even in the highest of them stops short of the full and perfect work of conscious elaboration. Psychic activity, which at every grade takes the form of synthesis of experience, attains its highest development in a reference of the whole variety and mass of experiences to a unitary self or person. So far, then, as more or less independent strands of mental process are disclosed in the various kinds of automatism that alternate in hysterical 'subjects' with their common self-consciousness, not only is there the interest of studying the abnormal formations by themselves, but they may be made to shed a new light upon the central problem of psychology. And still more, if evidence is next forthcoming that they can have an effective existence simultaneously with the subject's regular consciousness. The mustering of such evidence, with interpretation of it for the understanding both of what may be thus abnormal and of what is normal in mental life, is the task that Prof. Janet sets himself in his second and rather larger division of "Partial Automatism".

Readers must be sent to the book itself for the extraordinary

story of different "psychological existences" which Prof. Janet has found to concur, as well as alternate, in this or that 'subject' of his. They come first distinctly into view in connexion with the treatment of hypnotism in pt. i., the peculiar phenomena of memory there disclosed giving the means of marking their distinctness. Léonie, for example, a demure peasant woman of middle age, suffering from hysterical anæsthesia of the left side in her common or now normal condition, becomes gay and saucy in a somnambulic state into which she is apt to pass or can easily be thrown, and can from this be thrown further (with intermediate stages of lethargy and catalepsy) into still another hypnotic state, in which there appears a greater fulness of conscious life,—at least in the way of memory. For, while Léonie 1 knows nothing of Léonie 2 or 3; and Léonie 2, cognisant of Léonie 1 as a humdrum *other* person, knows nothing of Léonie 3; this last adds to experience of her own a cognisance of all that has happened in the experience of Léonie 2 and Léonie 1, though taking them for different persons from herself and from each other. Other 'subjects,' Lucie and Rose, with different morbid history and symptoms, present equally, or still more, complex mental alternations, of like general character but varying in some particulars. Now, the abnormal states of these 'subjects,'—whether of the hypnotic type just mentioned, or of the simpler cataleptic type, or of the other distinguished as "suggested,"—being all marked by an activity that is more or less automatic, there is in this afforded a means of determining the effective presence of one or other of the states concurrently with the normal conscious life of the individual. The facts of such concurrence are given in a chapter on "Subconscious Acts" (pp. 224-69). By easily-arranged experiments with his 'subjects,' otherwise normally conscious, Prof. Janet gets well-pronounced partial catalepsies (of insensitive hand, arm, &c.); and, again, by mere "distraction" of the main conscious stream, obtains execution of more or less complex suggested acts. He thereupon studies at length the facts of "post-hypnotic suggestion," meaning acts which, suggested under hypnotism, are unerringly performed in the waking state or in reinstated trance. The different classes of fact join on to one another, and leave him at the end with the general conclusion, not only that there are real psychological processes going on outside the ken of the subject's regular personal consciousness, but that these may have a quasi-personal unity of their own.

So far, it is with this notion of independent synthesis accomplished to greater or less degree by the side of the main stream of consciousness that he advances beyond the traditional thesis of Unconscious (or Subconscious) Mind. He makes a further advance when he next goes on to seek for an interpretation of the plural experience which the different kinds of automatic activity—but chiefly the activity of hypnotism—give evidence

of in the hysterical 'subjects' under investigation. The peculiar modifications of memory, before noted as sign of the hypnotic state, being now held to prove that the complex automatic acts abnormally executed imply the presence of other "psychological existence" besides the normal one, the question is, what explanation can be given of the interwoven breaks and resumptions of memory. Here the anæsthesias of Prof. Janet's 'subjects' assume a critical importance. It is to be borne in mind that the normal consciousness of those 'subjects,' though rounded off into the usual personal form, is maimed and imperfect to the extent of their want of sensibility; the anæsthesia affecting not only the skin (part or whole) but also, it may be, other organs of special sense, including that one of highest objective efficacy, the eye. Now, first, it may turn out with 'subjects' of this class that, on passing or being thrown into the abnormal hypnotic state, they acquire a fuller consciousness, by ceasing to manifest the anæsthesia of the normal (hysterical) state; and if, as in the case of Léonie, &c., they are susceptible of different degrees of hypnotic affection, it may be in the most advanced and rarest of these (for them) abnormal states that they most nearly approach to the normal condition of healthy people. Certain it is, according to Prof. Janet's experience, that only when, after being in any particular state of whatever degree, they again pass or are thrown into a state of the same kind or degree, do they have memory of what went on in its previous occurrence. This assertion holds without qualification (as one may say) *downwards: i.e.*, in any state, including the 'subject's' normal one of lower sense-potency, there will be no memory of what went on in the hypnotic state of higher sense-potency. Only in some still higher one, like that of Léonie 3 or Rose 4, may there be, along with exclusive memory of its own, memory also of all that has gone on in any lower state down to the so-called normal (Léonie 1, Rose 1). The memory, in fact, seems to be a function (as mathematicians would say) of the amount and kind of effective sense present in any of the states. And this conclusion can further be supported by more specially arranged experiments. Prof. Janet's 'subjects' being open to suggestions in their common and also in their hypnotic states, he can produce in them "systematised anæsthesias," meaning suggested loss of sensibility within strictly defined areas, especially of skin or eye. The phenomenon was well known to the older mesmerists; a reference to whom at all points is, by the way, one of the most interesting features of Prof. Janet's exposition. His own merit is in employing it as test for his view of memory as giving, by presence or absence, the one means of distinguishing between different "psychological existences". So far as can be judged from the record of his experiments, these seem to have been conducted with all due care, and they may be taken to warrant his conclusion as to the relation between memory and (effective) sense

in his 'subjects'. It may be the more readily accepted because, after all, it only bears out the current psychological doctrine that the representative image, as it directly revives the sense-percept for consciousness, involves excitation of the same cerebral parts. Since there can be no doubt that the anæsthesia of hysterical 'subjects' depends upon central rather than peripheral disturbance of the nerve-system, what hypnotism may be supposed to do for them is to restore the working of parts of the cerebral mechanism that have got out of gear, and thus promote mental efficiency for the time being. So far, on the other hand, as quite healthy persons may be hypnotisable at all, the effect in their case might rather be to throw the cerebral mechanism out of gear, with general loss of mental power, though with the possibility of abnormal heightening of particular functions set free for the time from regularly balanced control. However this may be, the relation that seems to be established, by experiment with those hysterical 'subjects,' between memory and perception, or (as it may be put more generally) between representative and presentative experience, has, over and above the light it throws on the varying complications and disintegrations of their mental life, an undeniable importance for psychology in general.

But the question still remains, how the plurality of "psychological existence" is to be reconciled with personal unity. Not to leave untouched what Prof. Janet has further to say on this main point, many other interesting observations on the behaviour of his 'subjects,' all discussed with much psychological acuteness, must be passed over. His whole next chapter (pp. 367-433), on "Various Forms of Psychological Disaggregation," can also be little more than mentioned. Here he reviews the different phenomena that in all ages have suggested the notion that certain forms of human action reveal the agency of external spirits, demons or what not, working through the human medium. That all of them—from the wonders of the divining rod, &c., through present-day spiritism, to the facts of impulsive madness, fixed idea, hallucination and possession—are (dupery apart) explicable from resolution of normal conscious life, in the 'subjects' of them, into separate strands of experience (passive and active) that run on together without mutual cognisance, is shown by Prof. Janet at length with excellent effect. For him they are but cases, more or less pronounced, of what he then goes on, in a final chapter (pp. 444-78) of pt. ii., to describe as "Moral Weakness" in opposition to "Moral Force". "Moral weakness," or "psychological misery," is that state of general disorganisation in which the mental life splits up into a number of groups of "sensations and images" working themselves out with an automatic regularity and relative independence. The antithesis is that "moral force" of the healthy individual, in whom, though automatism is also there (as seen in the phenomena of distraction, instinct, habit, passion), there is one supreme controlling activity

whereby the whole mental economy is held together. What, then, is the nature of this highest activity, in the abeyance of which it is that the elements of normal personality are so prone to fall asunder? Prof. Janet, for his part, can find it only in a volition that has no direct relation to such ideas (*viz.*, percepts and images) as are always in themselves automatically motor, but on the contrary depends upon a perfectly disparate class of "ideas of relations" or "judgments," not by themselves motor. He takes up, in fact, a position analogous, as he says, to the apperception-theory of Prof. Wundt or to the *réflexions* of Maine de Biran (who, it is evident throughout, has had a special influence on his whole manner of psychologising). Some slight indication is then offered (p. 474) as to how the volition thus determined by pure intellect may get into working relation with the images and percepts that have motor efficiency. It is, however, all too vague to afford a basis of useful discussion. And as something more may soon be said in these pages on the general question of will and automatism, anent Dr. H. Münsterberg's notable researches (cp. MIND No. 56, p. 607), there is the more excuse for abstaining from discussion at the end of a notice which, though not short, has been rendered by circumstances much more perfunctory than was intended. Its main purpose, however, will after all have been attained if the reader is not left in doubt that some of the deepest questions of psychology, and of philosophy too (in which connexion a short general "Conclusion," pp. 479-88, is not to be overlooked), have been placed in a new light by the labours of Prof. Pierre Janet.

EDITOR.

VIII.—NEW BOOKS.

[*These Notes (by various hands) do not exclude Critical Notices later on.*]

The Critical Philosophy of Immanuel Kant. By EDWARD CAIRD, LL.D., Professor of Moral Philosophy in the University of Glasgow, &c. 2 Vols. Glasgow: J. Maclehose & Sons, 1889. Pp. xxiv., 654; xix., 660.

This "connected view of the Critical Philosophy, showing the relations of the three *Critiques* to each other and to the other works of Kant, which may be regarded as illustrations or developments of his main argument," has not only a much wider scope than the author's *Philosophy of Kant* (1877), which was confined to the *Critique of Pure Reason*, but even in the part of it now concerned with this (i. 227-654, ii. 1-142) reproduces but a few passages from that earlier work. It is quite the most comprehensive and maturely considered contribution that has yet been made by an English writer to the understanding of Kant's whole philosophical achievement. Critical Notice will follow.

An Epitome of The Synthetic Philosophy. By F. HOWARD COLLINS. With a Preface by HERBERT SPENCER. London and Edinburgh: Williams & Norgate, 1889. Pp. xviii., 671.

The "compiler" (as he calls himself) of this goodly volume has already placed Mr. Spencer's readers under no ordinary debt by the careful indexes he has drawn up of late years for the different works composing "The System of Synthetic Philosophy". Now he does still more for them by giving, in a single volume (again not without the appendage of a serviceable universal index), the main gist of the whole ten volumes yet produced. It is a most useful piece of work, done not only with great devotion but also excellently well. Nor is the performance less meritorious because Mr. Spencer's exposition, proceeding always in a certain regulated fashion, lends itself more easily than another to abstraction of its main gist. The plan followed throughout is to reduce each "part" of the original to a single chapter, and each original chapter to a single paragraph. The result is a serried array of pregnant statements, the full meaning of which may not easily be apprehended by readers coming to them for the first time, but which, in their condensation, will admirably serve the purposes of those who, knowing the originals, may want to refer to particular points, or to be reminded of the general course of the argument at any stage of the philosopher's widely drawn system. Mr. Spencer's "preface," besides expressing a general approval of the enterprise in motive and result, reproduces sixteen short paragraphs (almost sentences) in which he had himself sought to convey to an American friend many years ago the cardinal principles of his whole scheme of thought. It is well that this quintessence of the system should be so brought into public view by Mr. Spencer himself, but when he gives the sentences as an epitome of Mr. Collins's "epitome," he hardly does himself or his follower full justice. The sentences are throughout of purely objective import, and suggest nothing of that subjective consideration which, as brought forward both

in *First Principles* and in *Principles of Psychology*, gives the system its properly philosophic character.

Proceedings of the Aristotelian Society for the Systematic Study of Philosophy. Vol. I. No. 2. London: Williams & Norgate, 1889. Pp. 143.

Of the papers here printed the most noteworthy is Mr. Hodgson's Presidential Address for the Session 1888-9, on "Common-Sense Philosophies". A somewhat wide meaning is given to the term; all philosophies—whatever their speculative pretensions—being classed as "philosophies of common-sense" in which (as it is contended) some inadequately analysed fact of experience is taken as the basis for a philosophy. The characteristic of the common-sense view of the universe is held to be that it regards it as consisting of Persons and Things,—rightly from the point of view of ordinary experience, but inadequately from the philosophical point of view. By common-sense, things as agents are identified, from practical motives, with their operation. This identification is then carried forward into philosophy and made a philosophical tenet. Thus the main question of philosophy—What reality is?—is answered as soon as asked, and philosophy becomes "a kind of general science, *minus* scientific exactitude". "Instead of making the dicta of common-sense absolute, what has to be done is to endeavour to retrace the steps, unravel the complicated courses, by which common-sense arrived at its dicta in the first instance, under the influence of its practical tendency." That is, genuine philosophy must begin with an analysis of knowledge. The assumption of common-sense facts as philosophical data being facilitated by the ambiguity of "consciousness *per se*" (which philosophy deals with under the rubrics of "analysis of elements" and "distinction of aspects") and "agent or agency" (which is a fact of science and common-sense),—agency being attributed to consciousness and ultimate philosophical meaning to the agents of the world of common-sense and of science,—the author sets himself to remove this ambiguity, after first tracking it through materialistic and idealistic systems of speculative philosophy. The last result attained is a philosophical distinction between "the finite world of things and persons" and "the infinite universe". The universe as infinite is found to be the ultimate object of philosophy. Speculatively this cannot be grasped; but to the practical reason it is accessible as an object of faith. The second paper, by Mr. M. H. Dziewicki, on "The Standpoint and First Conclusions of Scholastic Philosophy," is an attempt to find points of community between Scholasticism on one side, and Scepticism, Hegelianism and Empiricism (each in turn) on the other. The Rev. J. Lightfoot, in a paper on "The Philosophy of Revelation," argues for the philosophical possibility of a revelation, by supra-sensuous experience, to the individual soul. A rambling answer by Mr. B. Hollander to the question "Do separate Psychological Functions require separate Physiological Organs?" contributes nothing to the elucidation of the subject. Mr. B. Bosanquet, in a paper on "The Part played by Æsthetic in the Growth of Modern Philosophy," insists on the importance, for Europe, of the German movement of thought from Kant to Hegel, and, more particularly, on the influence of the æsthetic ideas of Winckelmann and Schiller in giving positive direction to this movement itself. Mr. F. C. Conybeare writes on "Proclus and the Close of Greek Philosophy," Mr. A. M. Ogilvie on "The Psychology of Sport and Play". Two 'Symposia' are printed: one on "What takes place in Voluntary Action?"; the other on "The Nature of Force," started in a paper by Dr. G. J. Stoney (given in abstract), of which nobody can say that it is not ambitious enough or that it is wanting in elaboration either.

A *History of Philosophy.* By JOHANN EDUARD ERDMANN, Professor of Philosophy in the University of Halle. English Translation edited by WILLISTON S. HOUGH, Ph.M., Assistant Professor of Mental and Moral Philosophy in the University of Minnesota. 3 Vols. London: Swan Sonnenschein & Co; New York: Macmillan & Co., 1890. Pp. xx., 736; xvi., 719; ii., 357.

"The Library of Philosophy," first announced some two years ago, is now formally inaugurated with the promised translation of Erdmann's well-known *Grundriss*. The scheme of the "Library" as given in MIND xiii. 317 is now farther filled in with a promise of an original (not historical) treatment of Ethics by Prof. E. Caird and of Epistemology by Mr. J. Ward. The translation of *Erdmann* has taken a year longer in the production than was contemplated, but this is no way surprising when the extent and difficulty of the work are considered. Though called only *Grundriss* by the author, in comparison with his larger work on Modern Philosophy (1834-53), the more compendious treatise, first published in its two divisions within the year 1866, was no mere compilation but, even when it gave only general indications, was a genuine book, based on independent reading and thought. The editor of the translation is therefore not unjustified in giving it to English readers as *A History of Philosophy*,—as, in point of fact, had been done before with Ueberweg's *Grundriss*, when that useful but very differently conceived book found a translator in the late Prof. G. Morris of Michigan. It is matter for real congratulation, in the dearth still of original English or American work over the whole field of historical philosophy, that by the side of the one important German compend of this generation the other, so well-fitted to serve as its complement, is now made accessible to the English-speaking student. In the latter as in the former case it is to an American scholar that thanks are due; but for *Erdmann* no less than six collaborators (four of them English) deserve credit by the side of Prof. Hough. Beyond translation of Erdmann's interesting prefaces to three editions (till 1878), the editor's duty has in fact been confined to revision of the work of the others. It is a good arrangement, this kind of co-operative translating, as shown a short time ago in the Oxford rendering of Lotze's *System*. One might only wish that the present editor had not so strictly limited himself to establishing uniformity of technical terms and phrases. In point of "literary form," which he professes to have also kept in view, more breaking-up of involved sentences would not have been amiss, for example, in the difficult part from Kant to Hegel. As to faithfulness, which after all is the main thing, the translation, so far as tested, comes out well from its execution under four eyes; though avoidable slips are not wanting (*e.g.*, ii. 612, Why is *Richtung* given as "tendency" rather than the obvious 'direction'?). The editor has, not without reason, refrained from adding to Erdmann's bibliographical references, except to give supplementary information about works that were progressing when cited in 1878; but he might well have made some necessary corrections in his author's perfunctory account of later English thinkers (down to Hamilton). Though it is not an unconscientious effort that Erdmann makes to do justice to these thinkers, it is certainly not a successful one that, after Locke, brings Peter Brown into prominence but no Hartley (ii. 137), and then (ii. 277), with incidental mention of Hartley's name, finds Priestley the more worthy to be signalised. But, indeed, it does not always fare satisfactorily with older and better-known names. The scheme of modern philosophy which finds no place for Berkeley between Locke and Hume, but, because of the label "Idealistic," puts him away,

after Leibniz, between the Wolffian and the Scottish or Introspectionist schools, is surely somewhat artificial. Nevertheless, no fancies about historical development can ever prevent Erdmann, when he has an important thinker in hand, from making observations that go straight to the heart of things. A word, finally, on his Appendix of "German Philosophy since Hegel," here printed as vol. iii. (fairly uniform in external size with the others, because of the thicker paper used). Though Erdmann declares that the more he worked at this Appendix the less satisfied he became with it, it is certain that no such bright and instructive a presentation has ever yet come from other hand: to the readers of the English translation it should be specially welcome.

The Science of Knowledge. By J. G. FICHTE. Translated from the German by A. E. KROEGER. With a Preface by WILLIAM T. HARRIS, Professor of the School of Philosophy, Concord, Mass.: Editor of the *Journal of Speculative Philosophy*, &c. London: Trübner & Co., 1889. Pp. xxiii., 377.

The Science of Rights. By J. G. FICHTE. Translated from the German by A. E. KROEGER. With a Preface by WILLIAM T. HARRIS, &c. London: Trübner & Co., 1889. Pp. 505.

These additions to the "English and Foreign Philosophical Library" are to be welcomed as part of the systematic effort that has been continued for some time past, not least by Mr. Harris,—who writes introductions to both volumes,—to make English readers acquainted with the results of the German philosophical movement from Kant to Hegel. The translations of the *Science of Knowledge* and *Science of Rights* do not appear to have seen the light previously to their present publication, although Mr. Kroeger has contributed translations of several other works of Fichte to the *Journal of Speculative Philosophy*. "The reflections of a Kant, a Fichte or a Hegel," Mr. Harris remarks, "will doubtless provoke dissent in the reader's mind,"—as will also some of the reflections in his own prefaces. "But they will already have served a good purpose when they have been the occasion for so much study as dissent implies."

A Student's Manual of Ethical Philosophy. Adapted from the German of G. VON GIŻYCKI, Professor of Philosophy in the University of Berlin, by STANTON COIT, Ph.D. London: Swan Sonnenschein & Co., 1889. Pp. viii., 304.

The German original of this book has been so lately reviewed at length in MIND xiv. 278, that attention need only be drawn to the fact that it has found the best possible translator in Dr. Coit, who stands in special relation and sympathy with the author. A translation it is in the main, but there are some omissions (notably, the considerable criticism of Kant and Schopenhauer's doctrine of transcendental freedom, pp. 250-77 of the original), and also occasional substitutions. Deserving as it does warm welcome in its English dress, it is to be hoped that the book will not be prevented from reaching the general reader for whom it was intended, by the somewhat unfortunate title now chosen for it. For "student's manual" its very excellences do not well suit it. The author's good example in providing an index was worthy of being followed.

Through the Ivory Gate: Studies in Psychology and History. By WILLIAM W. IRELAND, M.D., &c. Edinburgh: Bell & Bradfute, 1889. Pp. vii., 311.

Under another fanciful title, and reversing the "History and Psychology" of his old sub-title, the author of *The Blot upon the Brain* (see MIND xi. 126), here gives, from the alienist's point of view, a circumstantial account of Swedenborg's life and mental activity (pp. 1-129), followed by shorter studies of the insanity of William Blake, Louis II. of Bavaria, C. J. Guiteau, L. Riel, G. Malagrida the Jesuit, and the two potentates, Theodore and Thebaw, of Abyssinia and Burma. It is a sufficiently varied collection of men all, according to the author, "led away by delusions or uncontrollable passions from the right comprehension of things or the right line of conduct". The sketches are eminently readable, and the first of them has, from the character and influence of its subject, a special interest.

Kant, Lotze and Ritschl. A Critical Examination by LEONHARD STÄHLIN, Bayreuth. Translated by D. W. SIMON, Ph.D. (Tüb.), Professor of Theology in the Congregational Theological Hall, Edinburgh. Edinburgh: T. & T. Clark, 1889. Pp. xxxii., 327.

Herr Stählin's work—the first two parts of which especially have an interest for philosophical readers—is an examination of the theology of Ritschl as founded on his theory of cognition, and of the foundation of this in the theories of cognition of Kant and Lotze. The present translation is put forth because the book deals with ideas that have already acquired influence in Britain and America and are likely to acquire more. The translator and his author alike aim at overthrowing the position "that knowledge proper is possible only with regard to sensuous phenomena and certain of their relations"; the super-sensuous sphere of existence that is the object of theology being, according to this position, not an object of knowledge. Theology, the translator would maintain, can be constructed as a genuine science on a basis of experience which is not less real because it is not sensuous. To overthrow the theoretical agnosticism, now gaining admission among theologians, which prevents the acceptance of this point of view in theology, it is above all necessary to go beyond the principles of the Kantian philosophy; for "the tap-root of all this semi-conscious agnosticism draws its chief nourishment, unknown to itself, from the soil of Kantism—from the theory of cognition which it is the aim of this book to hoist on its own petard". The first part of the book examines the Kantian philosophy; its first section being devoted to Kant himself (pp. 5-83), its second to Neo-Kantism (pp. 83-115). The second part deals with "The Philosophy of Lotze" (pp. 116-156), the third with "The Theology of Albrecht Ritschl" (pp. 157-288). There is an Appendix (pp. 289-327) consisting of notes. Kantism and Neo-Kantism alike, the author finds, result theoretically in scepticism, practically in "illusionism". Lotze's merits in the statement of the problem of philosophy deserve acknowledgment, but he has not succeeded in constructing a self-consistent system. "His theory of cognition in particular is full of contradictions, and ends in Scepticism." Philosophy, therefore, to provide a satisfactory foundation for theology, as well as in its own interests, must not simply develop the doctrines of Kant and Lotze but must go beyond them.

The Evolution of Sex. By Professor PATRICK GEDDES and J. ARTHUR THOMSON. With 104 Illustrations. London: Walter Scott, 1889. Pp. xvi., 322.

Of this book—which gives a very full account both of the facts of the evolution of sex and of the theories hazarded towards its explana-

tion—chap. xix. is devoted to "Psychological and Ethical Aspects". The authors arrive at the conclusion that, biologically, nutrition and reproduction, while they are primitively one, in the course of evolution become complementary and, to a certain extent, antagonistic functions. Psychologically, "the primitive hunger and love," hardly distinguishable at the outset but afterwards associated respectively with the two contrasting biological functions, "become the starting-points of divergent lines of egoistic and altruistic emotion and activity". Undue predominance of the expressions of either function brings on degeneration. The ideal that may be figured as the end of evolution is their harmonious blending. When the sexes have become differentiated, the rule is that "the general heredity is perpetuated primarily by the female, while variations are introduced by the male". In the development of altruism, however, the females have taken the lead; for here "the reproductive sacrifice was one of the determinants of progress".

Aristotelianism. "The Ethics of Aristotle." By Rev. I. GREGORY SMITH, M.A., LL.D., Edin., &c. "The Logical Treatises, the Metaphysics, the Psychology, the Politics." By Rev. WILLIAM GRUNDY, M.A., Head Master of Malvern College; late Fellow of Worcester College, Oxford. London: Society for Promoting Christian Knowledge, 1889. Pp. x., 228.

This book (now in its third edition, the first having appeared in 1886) is one of the series "Chief Ancient Philosophies," of which the first two volumes (*Epicureanism* by Prof. W. Wallace and *Stoicism* by Mr. Capes) were noticed in MIND vi. 145. The distinctive feature of the account here given of "Aristotelianism" is the effort to bring Aristotle's thought into relation with questions discussed at the present day, and to compare his doctrines with those of modern thinkers. It is interesting to read, but, when judgment is passed, a little tinged by the desire to point out the shortcomings of ancient as compared with Christian thought. Mr. Smith's work fills 98 pages, Mr. Grundy's the rest of the volume.

Individualism: A System of Politics. By WORDSWORTH DONISTHORPE, Barrister-at-Law, Author of *Principles of Plutology*, &c. London: Macmillan & Co., 1889. Pp. x., 393.

This is a book that contains a good deal of independent thought and vigorous writing, though it can hardly be said to furnish anything of the nature of a "system". The "Individualism" advocated by the author is the theory of government of which, as he holds, the "rough foundations" have been laid by Mr. Spencer, "who has contributed more to the scientific study of society than any other thinker—not even excepting Auguste Comte or John Austin". There are, however, in Mr. Spencer's attempted justification of the theory, vestiges of the doctrine of "natural rights," and this doctrine he finds himself obliged to reject; holding that the only test of law is "the welfare of the group". The welfare of the group, he contends, is best promoted by unlimited industrial competition. "The individualist believes that the enlightened and progressive self-interest of individuals will eventually, though gradually, bring about a higher order of society—higher, probably, than any human being now living could even conceive, much less plan." In working (within the limits of our power) towards this higher order of society, we have to consider what is the permanent tendency of civilisation. Civilisation, it is found, tends in the long run to increase individual freedom; and this tendency, in the author's view, can best be aided by minimising State-intervention.

Rosmini, a Christian Philosopher, as understood by his own School. By the Rev. STEPHEN EYRE JARVIS. Second Edition. Market Weighton: St. William's Press, 1888. Pp. 86.

The author first sets forth the principles of Rosmini's philosophy—especially his principle that the innate and indeterminate idea of being or existence is the foundation of all our ideas. Next he proceeds to point out the consequences of those principles, as applied "in defence of those vital truths, both natural and revealed, which form the common inheritance of Christianity". Short papers are appended on the *Psychology* (pp. 63-9) and *Maxims of Christian Perfection* (pp. 69-76). Lastly, there is a classified index of Rosmini's works (pp. 77-86).

The Ruling Principle of Method applied to Education. By ANTONIO ROSMINI SERBATI. Translated by Mrs. WILLIAM GREY. Boston: D. C. Heath & Co., 1887. [London: Isbister & Co.] Pp. xxv., 363.

This excellent translation of Rosmini's fragment on Pedagogy—published two years since in America but only now obtainable in England—demands attention both on account of the interest of the work itself and because of the remarkable agreement of Rosmini's position—arrived at independently and almost contemporaneously—with that of Froebel. The coincidences of Rosmini's thoughts with those of Froebel's more developed system (which has been made known in England especially by Miss Shirreff) are pointed out by Mrs. Grey in her notes; attention having been drawn in the preface to the general agreement of principle. This agreement is in the contention by Froebel and Rosmini alike for a "natural" system of education—that is, a system that encourages the powers of the child to unfold themselves in the order in which, psychologically, they tend of themselves to develop. Starting from this principle, both thinkers arrived at the view that perceptive activity is to be made the beginning of instruction. "Ordered and constructive play," occupations providing an outlet for originality, music and dramatic stories are parts of both systems alike. According to Rosmini, in teaching children how to classify things, we must not proceed from the individual thing upwards by gradual stages to the most extensive classes of things, but—after the perceptive basis has been gained—must teach first the words that stand for the most extensive classes. The intermediate classes are afterwards to be filled in by descending from these last; for this is everywhere the path that the mind spontaneously takes. In this process, it is always the child's conceptions and not our own that are to be kept in view. Similarly, in moral education it is the moral conceptions the child is capable of forming at each stage that are to be appealed to; abstract rules that regulate the lives of adults but are not intelligible to the child are not to be laid down for his guidance: the child is to be guided by what are, in a sense, *his own* rules. "It follows that the child must always be considered as a moral being, for such he always is; but, at the same time, the form and nature of his morality at each stage of childhood has to be investigated." The investigation as carried out by Rosmini is equally remarkable for its penetration and sympathy. His conclusion as to the general method of moral education is in close agreement with his view of intellectual education. In both alike the principle is that the natural impulses and interests are to be appealed to in the order of their spontaneous growth. An observation that is developed in a very interesting way is that of the boundlessness of the credulity of children (and of primitive men) and its gradual limitation by experience

(pp. 235-245). Everywhere in this fragment Rosmini's psychological insight manifests itself through his scholastic distinctions of "orders of cognitions," &c. These, if they hinder rather than help the exposition of the real matter he has to convey, throw interesting light on his general system of thought.

Philosophia Ultima, or, Science of the Sciences. Vol. I. An Historical and Critical Introduction to the Final Philosophy as issuing from the Harmony of Science and Religion. Third Edition, Abridged and Revised. Vol. II. The History of the Sciences and the Logic of the Sciences. By CHARLES WOODRUFF SHIELDS, D.D., LL.D., Professor in Princeton College. London: Sampson Low, 1889. Pp. x., 419; vi., 482.

The first of these volumes is the third edition of a work noticed in MIND iii. 427. It has been somewhat abridged by transference of parts to the second volume—already projected on the publication of the first, and containing the development of a scheme of the arts and sciences then projected. The whole is the outcome of the author's view summed up in the phrase—"the umpirage of philosophy between science and religion". With the aim of working towards such a philosophical reconciliation as he now attempts, he had published in 1861 a brief essay entitled *Philosophia Ultima*, together with a corresponding scheme of academic studies. For it is from the Universities, in his view, that the reconciliation must proceed. "It is by means of academic training alone that the whole social organism can be reached and cured of its present vicious and morbid action." The teaching of Christianity and the teaching of the sciences having fallen apart, the unity of Christian culture is to be restored by the confrontation of the results of science with theological doctrines and the constitution, from the philosophical point of view, of a single body of knowledge of which "the human and the divine factors" shall be maintained in correlation. In pursuance of the author's scheme, a chair of instruction was secured in the College of New Jersey in 1865. The volume formerly noticed, and now the present two volumes, contain—along with other matter—the results of his academical activity spread over all the years since. The contents of the new volume are:—Introduction. The Aim and Scope of Philosophy. Part i. Philosophy as the Science of the Sciences. Ch. 1. The Purification of the Sciences; 2. Survey of the Sciences; 3. The Science of the Sciences. Part ii. Philosophy as the Art or Logic of the Sciences. Ch. 1. Logic of the Empirical Sciences; 2. Logic of the Metaphysical Sciences (Evidences of Theism, Natural Theology, Natural Religion and Revealed Religion); 3. Logic of the Science of Sciences (Canon I. Reason and Revelation are Complemental Factors of Knowledge in each of the sciences. Canon II. The Province of Revelation expands as that of Reason contracts in the ascending scale of the sciences. Canon III. The reciprocal action of Reason and Revelation throughout the Sciences involves the indefinite expansion of human science towards divine omniscience). These indications may serve for the author's general point of view. His writing, throughout the two large volumes, is suffused by much warmth of human interest, and the all-comprehensiveness of his reading is truly remarkable.

Fundamental Problems. The Method of Philosophy as a Systematic Arrangement of Knowledge. By Dr. PAUL CARUS. Chicago: *The Open Court* Publishing Company, 1889. Pp. 267.

The Editor of *The Open Court* here republishes a series of essays that

have appeared in that Journal. Prefixed to the volume are extracts from Marcus Aurelius giving a summary of the Stoical view of man and of the universe. The author seeks to develop on the lines of modern science and philosophy a similar monistic conception and to found on it an ethical doctrine according to which "individuals are moral in so far as they conform with the Cosmos, in so far as they become one with the All and conform to its order, or, humanly speaking, as they obey the laws of the whole". This ethical doctrine founded on Monism he would call "Meliorism" because progress is the result of obedience to the laws of the Cosmos; these being summed up in the law of Evolution.

The Problem of Personality. Thesis presented for the Degree of Doctor of Philosophy at Cornell University, June, 1889. By ELIZA RITCHIE. Ithaca, N.Y.; Andrus & Church, 1889. Pp. 42.

The doctrine of the personality of God, the author contends, is not incompatible with the modern theory of the thoroughgoing parallelism of physical and mental events. The material concomitant of the divine personality may be held to be the universe as a whole.

Handbook of Psychology. "Senses and Intellect." By JAMES MARK BALDWIN, Ph.D., Professor of Philosophy in Lake Forest University. New York: Henry Holt & Co., 1889. Pp. xiii., 343.

Prof. Baldwin (now transferred to the chair of Logic and Metaphysics in the University of Toronto), after appearing some years ago as translator of Prof. Ribot's book on contemporary German psychology (see MIND xi. 439), here issues the first part of a psychological exposition of his own. The second part will deal with the Emotions and Will. In the meantime he suggests the use of Dr. McCosh's *Motive Powers* in connexion with the present work for class-room instruction. This indicates his general position, which is that of a follower of Dr. McCosh, with a general willingness to take up all results of scientific psychology that can be incorporated in the traditional scheme, philosophical and psychological. Philosophical realism is met with early in the volume, where a "presentative" element is found in sensation by which an immediate knowledge of objects is given. A kind of "nativism" (as the author himself calls it) is professed as regards the acquirement of the perception of space. Towards the end of the book we encounter the doctrine of "the presence of necessary rational principles in the mind," in the form of "intuitions" involving many momentous truths. In pure psychology a form of the Faculty-doctrine is upheld. "Faculty," however, the author says (p. 35 n.), properly restricted, is synonymous with "function". Thus, for example, there are three "faculties or functions" of Intellect, Feeling and Will. We are also told of the faculty or function of Apperception, &c. It is interesting to see the Scholastic petrifaction of Aristotle, which in various ways has been handed on or restored in modern times, thus (though imperfectly) breaking up under the influence of independent thought or new knowledge; and Prof. Baldwin, like his teacher Dr. McCosh, but to a greater extent, is able to incorporate with his scheme the results of much recent work, especially in psychophysics. It is interesting to note the terms in which he accepts the "universal and uniform connexion" of mental phenomena with the bodily organism:— "The ultimate laws of psychology must find their completion in the psychophysical connexion, since a complete explanation of a phenomenon must include its cause and essential conditions. This being true, and the law of conservation of energy holding in brain activities, we are led to

the high probability that all mental acts have a physical basis. The purely mental in consciousness is therefore psychophysical in fact, and the subjective law of such phenomena must yield in generality to the psychophysical laws which include all mental phenomena in fact. With any other supposition, we destroy the unity of mind, since, with the lower operations governed by laws of mind and body in their relation, and the higher by laws of mind without relation to body, how could the two systems of laws be held in harmony?" To this passage it certainly cannot be objected that the parallelism of physical and mental processes is not sufficiently recognised. On the question of psychological method —as might be expected in this case from the tradition he upholds—Prof. Baldwin clearly affirms that introspection, however it may have to be supplemented, must always remain the fundamental psychological method. "The ultimate basis," as he says (p. 19), "of psychological interpretation and construction, is the experience of the individual, in so far as it has universal meaning." The order of topics, which in this kind of book has a special significance, is as follows :—Introduction : Nature of Psychology (ch. 1). Psychological Method (ch. 2). Classification and Division (ch. 3). Part i. : General Characteristics of Mind. Consciousness (ch. 4). Attention (ch. 5). Part ii. : Intellect. Division of the Intellectual Functions (ch. 6). The Apperceptive Function; Presentation; Sensation (ch. 7). Perception (ch. 8). Representation; Memory; Retention and Reproduction (ch. 9). Recognition and Localisation (ch. 10). Combination; Association (ch. 11). Imagination (ch. 12). Illusions (ch. 13). Elaboration; Thought (ch. 14). Ths Rational Function; Reason (ch. 15). The book includes catholic directions as to further reading on the subjects treated, and should prove of good service to students.

Monism or Advaitism? (An Introduction to the Advaita-philosophy read by the light of Modern Science.) By MANILAL NABHUBAI DVIVEDI, Professor of Sanskrit, Sa'malda's College, Bha'vnagar. Bombay: Subodha-Praka's'a Press, 1889. Pp. 104.

This is a very interesting contribution to the history of Indian philosophy. "Advaitism" (non-duality) is the name given to the monistic doctrine developed most explicitly by a school of thinkers of whom the author does not profess to determine the exact date, though he holds that their thought is last in order of development. The doctrine of "Monism" or "Advaitism" (whichever we choose to call it) he regards as expressing the essential doctrine of early Aryan religion, in which was involved the notion of an immanent unity of nature. Through this doctrine—which in philosophy simply passed from the implicit to the explicit stage—religion and science were enabled to exist and develop side by side, instead of falling into conflict, as in Europe, where their mutual hostility is explicable from the opposition between the Aryan notion of immanence, embodied in science, and the Semitic notion of a transcendent Deity, embodied in Christian theology. Modern European "Monism" is thus a return to the primitive unity of Aryan science and religion; "Advaitism" being its philosophical anticipation. In setting forth the stages of thought that led to "Advaitism," the author seeks to bring out points of resemblance between modern doctrines of Evolution and the Indian doctrines; even finding that these contain anticipations of special scientific theories, and that Indian philosophy made "the first rational attempt at a mechanical explanation of the Universe". Less stress perhaps ought to have been laid on the resemblances in points of detail, which for the most part can only be accidental; and unless

"mechanical" is taken as equivalent to "necessary," it does not seem possible to uphold the identity, even in general character, of Indian Monism and the Monism of modern scientific writers such as Haeckel. Indeed, it can hardly be made out that the Monism of the Indian thinkers discussed is naturalistic (not to say mechanical) at all. The author's own expositions seem at least to be more easily reconcilable with the view that regards it as a theory of the derivation of nature—essentially by some kind of lapse—from a spiritual unity. This, although, of course, it is equally to be distinguished from the doctrine of a transcendent cause of the world, is precisely the opposite of the doctrine that makes the unity of mind the culminating point of an evolutionary process, whether that process is regarded as "mechanical" or not. These criticisms, however, do not affect the point that the Indian philosophers did arrive at a Monism of their own—perhaps philosophically superior to some modern doctrines. It is a merit of the author's exposition that he sets forth the systems described so impartially that the reader is able to see, from his exposition taken by itself, exactly how far they support his thesis. The rejection of the idea of Creation by the Indian philosophy he has very well brought out.

Education et Hérédite. Etude sociologique. Par M. GUYAU. Paris: F. Alcan, 1889. Pp. xvi., 306.

This other posthumous work, following upon *L'Art au point de vue sociologique*, noted in MIND No. 56, p. 600, completes the series of sociological studies carried through by one of the most ardent and untiring of thinkers. It deals with the antinomy between the power ascribed to education on the one hand and to heredity on the other. For Guyau it is a true antinomy, reducing the moralist and the politician alike to impotence, if the effects of heredity are beyond remedy. He would solve the difficulty by bringing "suggestion" into play. In his view, neuropathic suggestion is only an aggrandised form of a normal process; education itself being "un ensemble de suggestions systématisées". The chief problems of physical, moral, æsthetic and scientific education are then in turn considered, from the higher point of view of nationality of race. Critical Notice of the two posthumous volumes, taken together, will follow.

La Psychologie de l'Effort et les Doctrines contemporaines. Par ALEXIS BERTRAND, Professeur de philosophie à la Faculté des Lettres de Lyon. Paris: F. Alcan, 1889. Pp. 203.

Prof. A. Bertrand here discharges part at least of the farther service which he spoke of rendering to Maine de Biran's memory and fame when, two years ago, he brought to light for the first time the various notable pieces collected in the volume *Science et Psychologie* (see MIND xii. 625). He had then to postpone publication of the correspondence, to which he had access, carried on by Biran (as he now more shortly calls the great French thinker) with Ampère, Cabanis, Destutt de Tracy and others. That correspondence he still leaves unpublished, but he draws freely upon the letters that passed with Ampère—and, to some extent, also upon what passed with the others—in order to throw light upon some more unpublished texts of Biran's which have a special bearing upon questions that are being hotly argued among psychologists at the present time. Chief of these is the question as to the true psychological interpretation of "Muscular Effort," and this is made the central topic of the little volume (pp. 66-125). The new elucidation which is here afforded of the fundamental conception of Biran's thought, as

worked out in concert with his scientific friend Ampère, has the way prepared for it in two prior chapters, "Psychological Sense" and "The first French Theory of the Unconscious"; while two concluding chapters follow on "Biranism applied to Education" and on "Ampère's Metaphysical Theory of Relations". Throughout, one gets the impression that Biran was indeed fortunate in having a man of Ampère's depth to communicate with, and in getting from him stimulus not less real when they agreed (as they generally did) than when they differed (as sometimes happened). Prof. Bertrand, in his pregnant and brightly-written chapters, has been able to do an act of justice to the great physicist, as well as bring into view the unique interest attaching to his own master, Biran, in the history of French psychology. Nor does he judge wrongly as to the importance, still in these days, of Biran's positive psychological results and applications. As regards the particular *crux* of the Sense of Effort, it was high time that there should come some counterblast to the chorus of French approval with which Prof. W. James's celebrated memoir (see MIND v. 582) has so long been received. If approval is still as freely accorded as it is by Prof. Pierre Janet in *L'Automatisme psychologique* (reviewed above), account is now to be taken not only of M. Fouillée's most recent stroke on the other side (see below, p. 150), but also of all the shrewd and pointed arguments which Prof. Bertrand here urges against Prof. James in the course of his exposition of Biran's and Ampère's joint reflections on the subject.

Le Réalisme de Reid. Par LIONEL DAURIAC, Professeur à la Faculté des Lettres de Montpellier. Paris: F. Alcan, 1889. Pp. 36.

The author traces Reid's doctrine of external perception to his metaphysical conception of substance and its qualities. This philosophical aspect of the doctrine, he thinks, has been somewhat neglected. Discussing the relations of Brown and Hamilton to Reid, he finds that Brown's theory of "perception by natural signs" was really developed from a part of Reid's principles, but that it leads to "theoretical idealism," and would therefore have been repudiated by Reid, who, if he had been called on to choose, would have decided for Hamilton's "natural realism". This doctrine of Hamilton's, it is true, is intrinsically of no value; but, in maintaining it against Brown, Hamilton showed himself the most faithful disciple of Reid.

Etudes Sociales. Par CHARLES SECRÉTAN. Paris: F. Alcan, 1889. Pp. iii., 339.

Essays on social subjects ("Les Réformes necessaires," "La Journée normale," "Le Luxe," "Des Rapports entre l'Economie politique et la Morale"), from the general point of view of the author's work, *La Civilisation et la Croyance* (see MIND xiii. 298), but with more insistence on the necessity of legislation—over and above the moral transformation of a greater or less number of individuals—in order to bring about the social changes advocated. Socialism is condemned on the ground that it is incompatible with liberty and that equality of material conditions is not an ideal to be aimed at; but the view is rejected that would confine the action of the State—at least in present circumstances—to the enforcement of contracts.

Principes de Philosophie morale, suivis d'Eclaircissements et d'Extraits de Lectures conformes aux Programmes de l'Enseignement secondaire spécial (6e Année), de l'Enseignement secondaire des jeunes filles, et des Ecoles normales primaires. Par JULES THOMAS, Ancien élève

de la Faculté des Lettres de Paris, Professeur agrégé de Philosophie au Lycée d'Annecy. Paris: F. Alcan, 1890. Pp. viii., 364.

The special aim of this text-book of moral philosophy is described in the title. Its philosophical doctrine is in general agreement with that of M. Renouvier, from whose works frequent extracts are made. The illustrative extracts, which are a feature of the volume, are not all philosophical; some being oratorical and some poetical. The three parts of the book deal respectively with the Principles of Morality (pp. 1-178), the Principles of Law or Right (pp. 179-316), and the Principles of Natural Religion (pp. 317-358). It seems to be very well adapted to its purpose, and has for outsiders a pædagogic interest.

GIUSEPPE CIMBALI. *La Volontà Umana in rapporto all' Organismo Naturale, Sociale e Giuridico.* Roma: Fratelli Bocca, 1889. Pp. 129.

An argument in support of a form of the social contract theory, regarded by the author as identical with that which was put forth in the 18th century by Spedalieri (see MIND xiv. 602). The "social contract" upheld is not an agreement supposed to have been historically made, but the "tacit and free contract" that all members of society are supposed to make by the mere fact of being members. The highest idea of the State attainable, it is contended against those who, grounding themselves on modern sociology, would wholly dispense with the conception of "rights," is the idea of it as "contractual or juridical".

Geschichte der neuern Philosophie. Von KUNO FISCHER. Neue Gesammtausgabe. Bd. II. *Gottfried Wilhelm Leibniz.* (Dritte neu bearbeitete Auflage.) Heidelberg: Carl Winter, 1889. Pp. xix., 622.

The present re-issue of Prof. K. Fischer's volume on Leibniz fills a blank that has very inconveniently been long left open in the revised and recast edition of his *Geschichte*, which has gone on appearing at intervals from 1878 (see MIND, vols. iv., v., viii., x.). The volume saw the light in 1888, but it now takes its place, under date 1889, in what is designated, with change of publisher, as a new collected edition of the whole work so far as yet completed (six volumes, from Descartes to Schelling). It was in 1867, more than twenty years ago, that the author last had Leibniz in hand, for second edition of the volume first published in 1855. The second edition was altered from the first less in the exposition of the philosophy than in the development given to the account of Leibniz' immensely varied activity through life, as also of his influence upon the leaders of the *Aufklärung* till Kant appeared on the scene. Now, again, the large changes made in the new edition affect but little the author's view of the philosophy. This remains what it was, save for verbal revision and some longer account of the stages of Leibniz' progress in thought as marked in his various writings. On the other hand, so much new matter has been interpolated about the untiring man's occupation with concerns of practical life, and more especially his relations with royal ladies, as traceable in his abounding correspondence, that, rather than delay the volume longer (or perhaps enlarge it beyond measure), the author has left out at the end all but the most general indication of the later fortunes of the philosophy. This falling-back from the attainment of the second edition will be much to be regretted, unless the omission (as is indeed suggested, if not expressed) is meant to be made good by supplementary treatment on a still more extended scale than before. If this should follow, it is not for the reader to quarrel with Prof. Fischer for having used his deft ability to fill out the biographical

picture with new details of more or less interest. One must, however, still regret that the biographical balance is not in the end better preserved than it is. There are some passages in Leibniz' life, such as his discovery of the differential calculus, here disposed of in three or four pages, which stood far more in need of careful and detailed consideration from an historian of philosophy than others to which whole chapters are devoted. It is a pity, too, when the volume was kept back so long, that the author has not, for the philosophy, made more use of the rich material which C. J. Gerhardt has first brought to light in his new edition of *Die philosophischen Schriften* (cp. MIND xiii. 312). Though this most valuable of all collections began to be published as far back as 1875, and had attained its projected size of six volumes before Prof. Fischer came out with his present vol. ii. in 1888, it is not mentioned at all among the editions signalised on pp. 318-22, is cited (the first vol. of it) only on two or three of the concluding pages (pp. 605 ff.), and is in the preface spoken of as if then (1888) there had appeared no more than the first three volumes—of Correspondence. With all this curious oversight, it is not surprising that Prof. Fischer (p. 315) passes on the traditional supposition that it was the so-called *Monadologie* that was written in 1714 for Prince Eugene, not, even supplementarily, referring to the demonstration given by Gerhardt that it must rather have been the other short compend, *Principes de la Nature et de la Grace;* but it is less intelligible how, in face of the epistolary evidence supplied as far back as 1875 by Gerhardt's first volume, he could still maintain his old view as to the influences that affected—or rather, according to him, did not affect—Leibniz' philosophical development. On the whole of this vexed, but also most interesting, question of development, whether before or after Leibniz had reached his central monadic conception, it is not too much to say that Prof. Fischer has now ceased to be at all a sufficient guide. But, at the same time, it is doing him no more than bare justice to say that his exposition of the philosopher's final doctrine remains still unapproached, for skill of reconciling statement and penetrative insight into essential meaning. The grasp of Leibniz' central thought which, from 1855, so many readers have first owed to him, their successors may now more effectively obtain from the twice revised pages of the present edition, which, it is to be hoped, will not, like the last, be suffered to get out of print long before a still better one is there to take its place.

August Comte, der Begründer des Positivismus. Sein Leben und Seine Lehre. Von HERMANN GRUBER, S.J. Freiburg i. B.: Herdersche Verlagshandlung, 1889. Pp. vii., 144.

Coming after Dr. M. Brütt's essay, *Der Positivismus*, &c. (see MIND xiv. 459), this small volume gives evidence of the more general interest which Comte's personality and work are at last exciting in Germany. Individual writers now and again, like Lange and Laas (to mention only the dead), have not overlooked the peculiar importance of the French thinker, but there has been no such recognition of Comtism, in speculation or practice, as we are familiar with in England for nearly half a century back. Father Gruber interweaves, with a remarkably comprehensive biography, a careful abstract of Comte's two chief works, made upon the originals. When it is mentioned that, for the biographical details, he not only takes full account of the extraordinary volume, the *Testament*, put into print in 1884, but has consulted the positivist *Revue Occidentale*, with all its curious supplementary information from Comtist disciples, down to the middle of the present year (1889), the interest of his

narrative may be imagined. Except that he does not seem to know of the disclosures in Comte's letters to his youthful friend, Valat (volume printed in 1870), there seems nothing that he has overlooked; and the result of his conscientious inquiries on all hands is a more fair and faithful account of the philosopher's life than any other single writer has yet given. The fairness is remarkable in one who is at heart so strong a religious partisan as he appears in incidental references to the wickedness of free-masonry and Bruno-glorification in Roman streets. While many incidents of Comte's life, as well as particulars of his doctrine, may easily be fastened on for condemnation or ridicule, Father Gruber, though quick to note the incongruities or worse, never indulges in cheap ridicule, and when he condemns does it always with discrimination. His general respectfulness towards Comte leaves him free to hint a more unfavourable judgment on the uncompromising agnostic spirits that have taken the place of Comte with a later generation, and may possibly spring in part from this dialectical motive: anyway, a Catholic ecclesiastic can always find points of contact with the high priest of *such* a religion of humanity as Comte, with the Catholic model always in his head, was ambitious to found. In this connexion may be noted the rather circumstantial account that the Jesuit writer gives of the singular overtures which, shortly before his death, Comte made to the Father-General of the Order for common spiritual action between them, with degradation of the Pope to the status of simple Roman bishop as one step by the way! As for later 'positivists,' whether under Comte's influence or not, Father Gruber writes of them--as also of Comte's predecessors—with his wonted breadth of information. He has read most of the discussion that has gone on, in periodical literature or otherwise, as to the relation of later English thought to Comte; and might be said to know the whole ground, if only he had acquainted himself, at least more fully, with the Comtist religious movement in England,—and especially with the differences that have rent the English (and, to a less degree, the French) following into two sects. Finally, it should be added that his incidental judgments on Comte's philosophical ideas are all marked by superior intelligence; while the general epilogue (of three or four pages) contains an interesting vindication of Catholic doctrine against positivism of whatever hue.

Grundriss des Systems der Philosophie als Bestimmungslehre. Von LUDWIG FISCHER. (Mit graphischen Darstellungen.) Wiesbaden: J. F. Bergmann, 1890. Pp. 122.

Introductory to a projected systematic work on philosophy. That which is primarily given in knowledge, according to the author, is "determination" (Bestimmung). Hence philosophy may be defined as the "doctrine of determination". The highest principle of determination is "absolute reciprocity" (die absolute Wechselwirkung). Having arrived at this result, the author seeks to define the various philosophical points of view (including his own) by a new system of symbolism; finally going on to a doctrine of man as formed by the reciprocal action of "substances of lower order," and of society as formed by the reciprocal action of individual men.

IMMANUEL KANT'S *Kritik der reinen Vernunft.* Mit Einleitung u. Anmerkungen herausgegeben von Dr. ERICH ADICKES. Berlin: Mayer u. Müller, 1889. Pp. xxvi., 723.

The author of *Kant's Systematik als systembildender Factor* (see MIND xiii. 141) here applies the principles of that acute essay to the editing in

detail of Kant's immortal work. His object is, while providing the student with a more carefully emended text than has yet been put forth, and doing it (with his publishers' help) in bold clear type on good paper at the astonishingly low price of three shillings, to give at the same time, in introduction and footnotes, the main results of all the inquiry into the gradual development of Kant's thought which, by others or himself, has been so fruitfully carried on of late years. His own special views naturally get chief prominence, but these, in spite of what is subjective in them, being in the main so inherently probable, are full of instruction even to the elementary student. By comparison of the editions pursued into minutest detail throughout, also by drawing upon the records now accessible of Kant's perplexities during the ten years from 1770, Dr. Adickes is able to distinguish with good effect between the essential and the accidental in Kant's philosophical achievement; also to show (according to his own special idea) what an amount of outstructure Kant had the way of rearing upon a basis of mere scaffolding, applied from without to the real edifice after this had been built up from within. Nothing could be more instructive to the student than to compare the notes in this edition with such a commentary on Kant's work as (say) Prof. Mahaffy supplied some years ago and has just now reproduced (see MIND No. 56, p. 594). Except for the account taken of the salient differences between the two editions of 1781 and 1787 at certain well-known points, the student would suppose from Prof. Mahaffy's exposition that all he reads in the *K. d. r. V.* was thought out by Kant exactly in the order and in the form of the printed book; yet nothing could be farther from the truth. With the recognition of this fact, a great deal of more or less imposing demonstration (from other commentators as well as from Prof. Mahaffy) of Kant's absolute infallibility in method and results assumes a somewhat different aspect. But it is not only the beginner that may learn from the labours of Dr. Adickes. His edition is sure to be henceforth kept near the hand of all Kantian scholars, whether or not they may think him uniformly successful in his contentions, great and small.

Die Philosophie des Thomas von Aquino kritisch gewürdigt von J. FROHSCHAMMER. Leipzig: F. A. Brockhaus, 1889. Pp. xxii., 537.

The author has already done much work, both original and historical, which has been noticed in former numbers of MIND. His present volume contains an exposition and a critical estimate of the philosophy of Thomas Aquinas, under the heads of (1) The Thomistic Doctrine of Knowledge, (2) Relations of Philosophy and Theology according to Thomas, (3) Philosophic Theism of Thomas, (4) Thomistic Nature-philosophy, (5) Thomistic Psychology, (6) Ethics and Politics of Thomas. There is an Appendix (pp. 512-537) on "The Eternity of the World". The book is based on long study. It has to some extent a polemical purpose; being directed against the Neo-Scholastic representation of the Thomistic system as, in essentials, the final outcome of philosophic thought.

Der Begriff der Wahrnehmung. Eine Studie zur Psychologie und Erkenntnisstheorie. Von Dr. WILHELM ENOCH. Hamburg: H. Carly, 1890. Pp. 102.

An attempt to mark off 'perception,' regarded as a mental power, from other 'powers'. The author bases his psychology on the distinction between intuition and thought, which he adopts from Kant, whose psychological indications he tries to follow generally; Kant's psychology

having been, as he thinks, unjustly rejected by Herbart. Perception he finds to be the 'intuition' of present objects. The intuition of absent objects is 'memory'. 'Sensation' is a 'sub-species' of perception. As opposed to perception, it is "the simple, the physical or unconscious, the subjective, the internal"; perception being the composite, conscious, objective and external.

Das Grundproblem der Erkenntnisstheorie. Eine phänomenologische Durchwanderung der möglichen erkenntnisstheoretischen Standpunkte. Von EDUARD VON HARTMANN. Leipzig: W. Friedrich, 1889. Pp. viii., 127.

A second, systematic part added to the author's *Kritische Grundlegung des transcendentalen Realismus*, of which the third edition was mentioned in MIND xi. 137; the book having been reviewed in i. 407. After criticising "Naïve Realism" (pp. 1-40) and "Transcendental Idealism" (pp. 40-112), the author goes on to a brief restatement of his doctrine of "Transcendental Realism" (pp. 112-127).

Inwiefern ist Leibniz in der Psychologie ein Vorgänger Herbarts. Ein Beitrag zur Geschichte der Psychologie. Von Dr. JOHANNES BARCHUDARIAN. Jena: Frommannsche Buchdruckerei (Hermann Pohle), 1889. Pp. 51.

The influence of Leibniz on Herbart in metaphysics being generally acknowledged, the author has set himself to inquire how far Herbart was directly influenced by Leibniz in psychology. First, however, he goes over the agreements and differences of the two thinkers in metaphysics. The most important point insisted on as regards their relations in psychology is the direct derivation of Herbart's obscured presentations "below the threshold" from Leibniz's "petites perceptions". The historical connexion of doctrines is in general very well set forth; though there is some exaggeration in the remarks, for example, that Leibniz was the first to lay aside the faculty-doctrine (p. 3), and that Herbart was the first to constitute psychology a completely independent science (p. 6).

Beiträge zur Theorie der mathematischen Erkenntniss. Von KONRAD ZINDLER. Mit vier Abbildungen im Texte. Wien: F. Tempsky, 1889. Pp. 98.

The chief point of this memoir (originally published in the *Sitzungsberichte* of the Vienna Academy of Science) is the reduction of properly mathematical judgments to "relations of incompatibility," defined (p. 15) as evident negative judgments on the co-existence of the foundations of relations (their condition being that the foundations cannot be thought together). These judgments, in the author's view, are not "empirical in the ordinary sense," for they are founded on "the experience of internal perception," and not on "the experience of natural science," which alone is usually called empirical,—its characteristic being to decide between possibilities that can equally be represented though only one of them is realised. The conception of the mathematical axiom is to be extended so as to include all the "evident propositions" of mathematics, whether they can be deduced from others or not. Nothing is gained by trying to reduce the axioms to the smallest possible number. For constant reference to intuition is required in the proof of propositions; and it is well to recognise this by not seeking to limit the number of axiomatic truths, but admitting as such all that from time to time have been assumed—for example, in the course of geometrical constructions as practised by the moderns.

Die psychologische Forschung und ihre Aufgabe in der Gegenwart. Akademische Antrittsrede von Dr. HEINRICH SPITTA, a. o. Professor der Philosophie an der Universität Tübingen. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1889. Pp. 36.

The author points out the general bearings of psychology, and defends the introspective method as furnishing the ground for all inferences drawn by other methods.

Ethisches Wissen und ethisches Handeln. Ein Beitrag zur Methodenlehre der Ethik. Von Dr. PAUL HENSEL, Privatdocent an der Universität Strasburg i. E. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1889. Pp. iv., 48.

In this interesting essay Dr. Hensel of Strasburg endeavours to show the true relation between the three ethical methods of Evolutionism, Utilitarianism and Intuitionism. By Evolutionism he means the history of ethical forces, in whatever form—Fichte's, Hegel's, or that of the Darwinians; and he regards it as a sufficient explanatory theory, but insufficient to supply a practical test of right and wrong. This test Utilitarianism supplies. The point of that doctrine is that it requires that every act should be generally applicable, and not a mere device to suit a particular individual: its motto is, 'Be normal'. It is thus a normative method, while Evolutionism in only a genetic method. But if we ask not simply for a test to justify right action, but for a guiding principle or motive, then Intuitionism claims its rights. Only conscience can determine moral value; and the one imperative of conscience is 'Thou shalt,' which receives its special application from special circumstances. Practical action, and the theoretical treatment of it, thus fall apart. On pp. 19, 20 there is an interesting treatment of the connexion between law and morality. The author, it will be observed, takes Evolutionism in a limited sense; few evolutionist systems do not give at once a practical standard of right and a theory of its origin.

Beiträge zur experimentellen Psychologie. Von HUGO MÜNSTERBERG, Dr. phil. et med., Privatdocent der Philosophie an der Universität Freiburg. Heft 2. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1889. Pp. 234.

Dr. Münsterberg did not fail to keep time with the continuation of his *Contributions to Experimental Psychology* (and even to surpass in size his first quarterly instalment), but, by an unfortunate mischance, his part ii. has been so delayed in transmission that it is now possible only to chronicle its contents in the barest manner. Four researches are now given: on Time-sense (pp. 1-68); on Fluctuations of Attention (pp. 69-124); on Eye-measure (pp. 125-81); on Space-sense of the Ear (pp. 182-234). They shall all receive due attention later on; his earlier researches on Voluntary and Involuntary Combination of Ideas (see MIND No. 56, p. 607) having first to be considered more at length.

The following NEW EDITIONS have been received:—

A Study of Religion: its Sources and Contents. By JAMES MARTINEAU, D.D., &c. Second Edition, revised. Oxford: Clarendon Press, 1889. Pp. xxxii., 392; vi., 392. [For this edition, brought down, like the second of *Types of Ethics*, from large to small octavo, the author has written a new preface, in which he replies especially to Prof. Flint, his

critic in MIND xiii. 590, vindicating the philosophical character of his *Study*, between modern 'science of religion' on the one hand, and 'theological apologetics' on the other.]

(1) *Bacon's Novum Organum*, &c. Second Edition, corrected and revised. Pp. xxii., 629. (2) *The Elements of Inductive Logic.* Fifth Edition, corrected and revised. Pp. xxv., 365. By THOMAS FOWLER, D.D., &c. Oxford: Clarendon Press, 1889. [In both volumes many minor alterations and additions have been made, rendering them still more serviceable than before to the different classes of students for whom they are intended. Some questionable statements in (1), remarked upon in MIND iv. 125, might with advantage not have been left unmodified.]

Microcosmus. By HERMANN LOTZE. Translated by ELIZABETH HAMILTON and E. E. CONSTANCE JONES. Third Edition. 2 Vols. Edinburgh: T. T. Clark, 1888. Pp. xxiv., 714; xi., 740. [It is a fact worth noting that this excellent translation should have reached a third edition within three years from its first appearance.]

RECEIVED also:—

J. H. Ferguson, *The Philosophy of Civilisation*, The Hague, Nyhoff (London, Whittingham), pp. xx., 331, ix.
W. A. Macdonald, *Humanitism: The Scientific Solution of the Social Problem*, London, Trübner, pp. xxii., 350.
F. Lagrange, *Physiology of Bodily Exercise*, London, Kegan Paul, Trench & Co., pp. xvi., 395.
E. B. Andrews, *Institutes of Economics*, Boston, U.S.A., Silver, Burdett & Co., pp. xii., 227.
J. H. Trench, *Form Study and Drawing in the Common Schools* (Educational Monographs of N. Y. Coll. for the Training of Teachers, ii. 5), New York (London, T. Laurie), pp. 145-92.
A. Grafé, *Etude sur quelques Paralysies d'Origine psychique*, Bruxelles, F. Hayez, pp. 121.
Th. Trede, *Das Heidenthum in der römischen Kirche*, Th. i., Gotha, F. A. Perthes, pp. 342.
Handlexikon für evangelische Theologen, 1te Lief., Gotha, F. A. Perthes, pp. 1-80.
P. Freyer, *Beispiele zur Logik, &c.*, 2te Aufl., Berlin, Weber, pp. 56.

NOTICE of some of these will follow.

IX.—FOREIGN PERIODICALS.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. xxi., No. 4. Leibniz—Critique of Locke (tr.). W. T. Harris—The Spiritual Sense of Dante's *Divina Commedia*. [An essay of over a hundred pages, containing a complete analysis of the *Divina Commedia* from the author's point of view. Having long sought for "a permanent truth in the poem," an "inner meaning" that would reconcile him to the outer form of the work of art, he here gives the results of his philosophical consideration.]

REVUE PHILOSOPHIQUE.—An. xiv., No. 10. P. Janet—Introduction à la science philosophique. v. La géographie de la philosophie. [On the shiftings of the geographical centre of philosophical study in Europe from the earliest Greek period to modern times.] Ch. Henry—Recherches psychophysiques: Le contraste, le rhythme, la mesure. J.-M. Guardia—Philosophes espagnols: Gomez Pereira (ii.). Rev. Gén. (P. Gauthiez—Travaux récents sur Giordano Bruno). Analyses, &c. (G. J. Romanes, *Mental Evolution in Man*, &c.). Notices bibliographiques. Rev. des Périod. No. 11. G. Tarde—Le crime et l'epilepsie. [A criticism on Lombroso's theory of the special connexion of crime with epilepsy. The author finds no evidence of this connexion. More generally, his argument is directed against the theory of criminality as a form of insanity, which, though not the genuine thought of Lombroso or his school, is sometimes mixed up with it—occasionally, it must be admitted, by Lombroso himself. The aim of M. Tarde's criticism is to disentangle the idea of the criminal as an 'ethological' type—which is in reality the fundamental idea of the Italian criminological school—from theories of the insanity (carrying with it legal irresponsibility) of criminals. He also criticises some of Lombroso's generalisations; contending that the influence of heredity as compared with that of education and surroundings has been somewhat exaggerated. Essentially, however, his criticism is in the interest of the school itself whose work he has done so much to make known.] A. Binet—Recherches sur les mouvements volontaires dans l'anesthésie hystérique. [The result of these observations—on *some* hysterical patients, as the author expressly points out—is that there are two distinct types of voluntary movements. On the sensitive as compared with the insensitive side of the 'hemianæsthetic' patient, (1) the height of the curve of muscular contraction is greater, (2) the lines of ascent and descent are steeper, (3) the physiological reaction-time is shorter, (4) fatigue is sooner manifested. Connexion of these two types of movement with sensitiveness and insensitiveness respectively is not to be regarded as established; for sometimes the distribution is opposite. What is established is that two well-marked types of voluntary movement exist.] Korsakoff—Sur une forme des maladies de la mémoire. [Description of a form of amnesia observed in cases of "multiple neuritis," with an attempt at physiological explanation. Events that take place during the disease are forgotten as soon as experienced. In cases of recovery they are afterwards remembered, and even during the disease they have, as the author thinks, a kind of unconscious influence on the actions of the patient. He would explain the phenomena by supposing that the nerve-fibres—which are known

to become disorganised in multiple neuritis — are the apparatus of association. This ceases to function during the disease, but impressions continue to be stored up in the cells, and, when there is recovery, can at length be properly associated, and therefore remembered.] P. Regnaud —Sur l'origine et la valeur de l'idée de racine et de suffixe dans les langues indo-européennes. [An argument against the hypothesis that the words of Indo-European languages have been formed from isolated roots by agglutination. Roots are simply "abstract elements of language". They were distinguished, in Sanskrit, by the early grammarians of India for mnemonic purposes and for the sake of convenience of classification, not with a scientific aim. It has been the error of the school of Bopp to take the grammatical classification as having value for the discovery of origins.] Variétés (L. Marillier—Le Congrès International de Psychologie Physiologique de 1889). Analyses, &c. (J. Nichol, *Francis Bacon;* P. Carus, *Fundamental Problems*). Rev. des Périod. No. 12. A. Fouillée—Le sentiment de l'effort et la conscience de l'action. [This is an important article, as containing a decided protest by M. Fouillée against the doctrine of the exclusively 'afferent' origin of the feeling of effort. The positive doctrine here developed is that there are three distinct elements in the consciousness of muscular activity: one due to the skin, one to the actual movement of the muscles, and one to an initiating cerebral discharge. This last element, of 'efferent' origin, is the properly active feeling. Proof of the existence of feelings of afferent origin is evidently no disproof of the existence of this. Yet those who argue against 'feelings of innervation' confine themselves to giving proof of the existence of the afferent factors; assuming that if these are present they are alone present. The pathological facts are not conclusive either way. Cerebral phenomena being phenomena of action and reaction, is it likely (M. Fouillée asks) that consciousness corresponds exclusively to the passive, never to the active, side of nervous processes? An efferent discharge within the brain, he contends, is that which underlies mental effort, or "attention" —and this in addition to the ideal muscular feelings accompanying, *e.g.*, represented articulations of words. In every act of will there is at once an *idea*, of (composite) afferent origin, and a "consciousness of action". This last is an entirely "subjective" factor, being (like pleasure and pain) not representable. None the less, it is a real feeling, and—however well physical science may get on without the notion of action—cannot be eliminated by the psychologist.] M. Walitzky—Contribution à l'étude des mensurations psychométriques chez les aliénés. [The most noteworthy result obtained is that, with the increase of maniacal agitation, the association-time diminishes as the time taken in choosing increases.] F. Paulhan—L'art chez l'enfant. [Reflections suggested by M. Perez's work, *L'Art et la Poésie chez l'Enfant*.] J.-M. Guardia– Gomez Pereira (fin). Analyses, &c. (*Scottish Metaphysics Reconstructed*, &c.). Rev. des Périod.

La Critique Philosophique (Nouv. Sér.).—An. v., No. 9. Berkeley. —*Traité des principes de la connaissance humaine*, traduit pour la première fois en français (iv.). . . . G. Lechalas—La geométrie générale. [An attempt to give to the ideas of non-Euclidian geometry a rationalistic turn—as opposed to the empirical turn that has usually been given to them.] F. Pillon—Observations sur la classification des sciences de M. Herbert Spencer. [Comparison of Mr. Spencer's classification of the sciences with Prof. Bain's criticisms, especially in relation to logic and mathematics, leads the author to consider Plato's doctrine of Ideas;

there being in Plato's doctrine as applied to geometry—and derived from it—certain resemblances to what Mr. Spencer says as to ideal points and lines which have no real existence, and which real objects imperfectly illustrate. Comparing Plato's explanation of the conception of such ideal objects by a supposed reminiscence of what the individual has known in a previous existence with Mr. Spencer's explanation by "ancestral experience," M. Pillon finds that the latter explanation by no means replaces the former philosophically. For the experience of ancestors is not supposed to have been different in kind from ours; it is not "intelligible" as opposed to "sensible". Consequently no accumulation of it can explain the ideal character recognised by Mr. Spencer in geometrical definitions.] No. 10. Berkeley—*Traité des principes, &c.* (fin). C. Renouvier—Victor Hugo. Le poète et le songeur (fin). [In concluding this series of articles—full of interest all through—M. Renouvier points to "immortality, liberty, divine personality," as the central conceptions expressed by Victor Hugo. In reality they are incompatible with his optimistic fatalism, with the evolutionist doctrines "dont il s'est laissé insuffler par l'air du siècle"; but the influence of these last was superficial; the others remained with him the true basis.] . . . No. 11. Catéchisme laïque, ou les grandes inductions de la morale. L. Ménard—Le jour des morts. C. Renouvier—La philosophie de la règle et du compas, ou des jugements synthétiques *a priori* dans la géométrie élémentaire. [A discussion suggested by the paper contributed by M. Lechalas to No. 9. In the author's view, the geometry of non-Euclidian space is simply a "mathematical exercise," of which the suppositions are quite unimaginable though not contradictory. It is true that the axiom, or rather postulate, of parallels, can be contested: for it is not an analytical but a synthetical judgment; its denial does not involve a contradiction. In this, however, it is in the same position as the other fundamental indemonstrable relations on which geometry is based. The difficulties raised by "imaginary geometry" are therefore insoluble by ordinary rationalism (for ordinary rationalism supposes the fundamental propositions of geometry to be incontestable, and they have been contested without the commission of any error of pure logic). It is in Kant's doctrine of synthetic judgments *a priori* and in "the criticist theory of certitude" that their solution is to be found.] . . . [It is announced that the *Critique Philosophique* ceases to appear at the end of 1889. The *Année Philosophique*, critical studies on the movement of general ideas, by M. Pillon, is in preparation.]

Rivista Italiana di Filosofia.—An. iv. 2, No. 2. F. Bonatelli—Un nuovo libro di metafisica. [A review of Prof. J. Bergmann's *Vorlesungen über Metaphysik* (1886).] N. R. d'Alfonso—Il parlare, il leggere e lo scrivere nei bambini. [Traces (in principle) the acquirement by children of command over language from the indeterminate to the determinate, and from less to more complex conditions, first in the case of uttered vowels, syllables and words, then in the cases of reading and writing as successively superposed.] V. Poggi—Il suicidio in Platone. [Starting from a *Critical and Philosophical History of Suicide*, written by Appiano Buonafede (1719-1793) under the pseudonym of Agatopisto Cromaziano, goes on to an investigation of Plato's view of suicide. The conclusion is that (contrary to the ordinary account, but in agreement with an expression of opinion let fall by the eighteenth century writer) suicide is permitted by Plato in cases of necessity.] Bibliografia, &c. No. 3. V. Benini—Della osservazione psichica interna. [On the advantages and disadvantages of self-observation as a psychological

method, with rules for its conduct.] R. Bobba—Le apologie nei primi tre secoli della Chiesa. A. Nagy—Il Nyâya e la logica aristotelica. [Recommends a more express investigation than has hitherto been made of a relation conjectured to exist between Aristotle's logic and the logic of Indian philosophers.] Bibliografia, &c.

Rivista di Filosofia Scientifica.—Vol. viii., No. 8. F. de Sarlo—Il concetto moderno della pazzia secondo alcune recenti pubblicazioni. C. Hanau—Del riso e del sorriso. [Laughter is contagious and superficial; smiling is individual and profound.] Note critiche, &c. (E. Morselli—Le teorie dell' eredità secondo G. C. Vanini. Proposto di un monumento a G. C. Vanini). Riv. Bib., &c. Necrologia (Pompeo Dumolard). No. 9. A. Sormani—La nuova religione dell' evoluzionismo. G. Cesca—Sul criterio della verità secondo le varie scuole filosofiche. [After a review of theories, arrives at the conclusion that, truth being agreement between consciousness and the phenomenal object of consciousness, its criterion is "perception judged by the intellect as normal and common to all men".] F. Gabotto—L'epicureismo italiano negli ultimi secoli del Medio-evo. [On the "Epicureans" of the thirteenth century, placed by Dante among the heresiarchs. The name, it is maintained, was probably a traditional name for those who were understood to deny the immortality of the soul, and therefore cannot be made a ground for the inference that within the Middle Age there was a philosophical school of followers of Epicurus. Those who were called "Epicureans" probably got their doctrine from Averroes. True Epicureanism does not appear till the Renaissance.] Questioni del Giorno (E. Morselli—Il "Museo psicologico" di Firenze). Riv. Anal. Riv. Bib., &c. No. 10. A Piazzi—Le idee filosofiche, specialmente pedagogiche, di C. A. Helvétius. [Finds in the pedagogical doctrines of Helvetius the limitations of his psychology, but insists on his merit in bringing forward the idea of an education founded on psychological principles, and directed to the formation of the moral character as well as of the intelligence.] E. D. Marinis—Un filosofo positivista italiano: Andrea Angiulli. Questioni del Giorno (E. Morselli—I nuovi programmi dei Licei). Riv. Anal. Riv. Bib., &c.

Philosophische Monatshefte.—Bd. xxvi., Heft 1, 2. P. Natorp—Aristoteles und die Eleaten (i.). [A vindication of the Eleatics against what the author takes to be the misunderstandings of Aristotle.] Th. Lipps—Æsthetischer Litteraturbericht (i.). [Contains, along with acute criticisms of Hartmann, Schasler, Guyau and Mr. W. P. Begg, statements of the author's main æsthetic positions. He insists on the psychological basis of æsthetic science and on the necessity of carrying æsthetic inquiries into detail. His psychological theory of beauty is associational. Universally valid æsthetic judgments he places on the same ground as universally valid scientific judgments. For both alike the condition is that the appropriate experience should have been had. Discussing art in relation to its material and in relation to practical ends, he finds that æsthetic contemplation does not consist in abstraction from the real properties of its matter, but in assigning value to these so far as they have part in the immediate impression of the work of art. Different kinds of material (in the case of a statue, for instance) demand different kinds of workmanship. Art does not exclude practical ends: the condition of their presence is that the æsthetic impression should be got quite independently of any reference to the utility that is subserved. An object is the object of a purely æsthetic judgment, not

(as Schasler and Hartmann say) so far as it is regarded as mere appearance, but so far as it is regarded in itself without reference to any other reality except that which may be suggested by the immediate perception of it. Beauty in nature is to be explained by associations with the human form or with human life. To view nature æsthetically is to animate it and anthropomorphise it. The beauty of the human form, again, is to be explained, not by consideration of its separate parts by themselves regarded as mere forms, but by reference to the physical or spiritual life they express. It is their association with this that gives them beauty. Thus the ultimate ground of all beauty is in a thought, having relation to human life, that is associated (not casually for the individual, but intrinsically) with the immediate perception of the object.] Recensionen. Litteraturbericht, &c. (J. Dewey, *Leibniz's New Essays;* G. S. Morris, *Hegel's Philosophy of the State and of History*, &c.).

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. xiii., Heft 4. S. Hansen—Versuch einer Kritik des Mill'schen Subjectivismus. [The two chief defects of Mill's "subjectivistic" theory of the external world are (1) his substitution of a psychological investigation of the origin of belief in the reality of objects for a philosophical examination of its validity, (2) an ambiguity in his use of the term "possibility," which he sometimes uses in its strict sense and sometimes hypostasises so as to make "possible sensations" a kind of reality. Psychologically Mill's theory is true, but realism is true philosophically.] B. Kerry—Ueber Anschauung und ihre psychische Verarbeitung (vi.). H. Höffding—Ueber Wiederkennen, Association und psychische Activität (i.). [The first part of a general investigation of mental association and its relations to "psychical activity," beginning with a rather minute examination of the fact of "immediate recognition" of mental states as having occurred before, and of the conditions under which this recognition takes place.] Anzeige. Selbstanzeigen, &c. (F. Tönnies, Hobbes's *Elements of Law* and *Behemoth*, &c.).

PHILOSOPHISCHE STUDIEN.—Bd. v., Heft 4. J. Merkel—Die Abhängigkeit zwischen Reiz und Empfindung (iii.). [Results partly confirming and partly supplementing Weber's law in the case of sound. A new formula is proposed for the dependence between sensation and stimulus, applicable to light and pressure (dealt with in the first two papers of the series) as well as to sound.] J. Schischmánow—Untersuchungen über die Empfindlichkeit des Intervallsinnes [The result first arrived at is that "sensitiveness to difference of tone is greater for diminution than for increase of the interval". This, however, has only been ascertained to be true in cases where the lower tone is the variable. Perhaps, then, the observed phenomenon depends on the separate tone rather than on the extent of the interval. Further investigation, the author thinks, might establish the proposition that "any raising of a tone is more easily apprehended than its deepening".] G. Martius—Ueber die scheinbare Grösse der Gegenstände und ihre Beziehung zur Grösse der Netzhautbilder. [It is first accepted as approximately true that "objects with the same visual angle appear of equal size; the apparent magnitude of objects seen under different visual angles increases and diminishes in direct proportion to the increase and diminution of their visual angle". The result of the present research is to supplement this by another proposition: "The same retinal image, seen at different distances (projected to different distances), corresponds to space-images of different magnitude, and the increase of magnitude is approximately proportional to the

distance ".] E. Leumann—Die Seelenthätigkeit in ihrem Verhältniss zu Blutumlauf und Athmung. [Having conjectured that rapidity of mental processes is proportional to rapidity of circulation and respiration, the author finds experimentally that rhythmical intervals in the scanning of verse increase and diminish with the pulse-intervals, although there is not strict arithmetical proportion.] W. Brix—Der mathematische Zahlbegriff und seine Entwicklungsformen (i.). [All particular "number-concepts" are to be derived by successive determination from the highest concept—that of "manifoldness". The logical investigation of the conception must be preceded by its historical and genetic investigation. This preliminary part is contained in the two chapters now printed, which are entitled—"The Historical Development of the Conception of Number," and "The Psychological Forms of the Conception of Number".]

ARCHIV FÜR GESCHICHTE DER PHILOSOPHIE.—Bd. iii., Heft 1. A Chiappelli—Per la storia della Sofistica greca. [Traces the influence of the antithesis of φύσις and νόμος on the development of Greek thought before and within the Sophistic period. Occupation with the problem presented by this antithesis is found to be the point of connexion between the earlier and the later Sophists.] J. Freudenthal—Zur Beurtheilung der Scholastik. [A vigorous confutation of some positions taken up by G. Kaufmann, who has maintained, not only that there were beginnings of independent thought in the Scholastic period (which the author admits), but that Scholasticism was "the creator of the idea of science as an independent power"!] A. Gaspary—Zur Chronologie des Streites der Griechen über Plato und Aristoteles im 15. Jahrhundert. R. Stölzle —Descartes' Lebensende. [Gives a letter describing Descartes' last illness, conjectured, apparently on good grounds, to have been written by van Wulen, the physician who attended him.] F. Tönnies—Siebzehn Briefe des Thomas Hobbes an Samuel Sorbière, nebst Briefen Sorbière's, Mersenne's, u. Aa. (i.). [Only two letters of Hobbes are given in the present article. Remarks on the correspondence are deferred until after its complete publication.] L. Stein—Zwei ungedruckte Briefe von Leibniz über Spinoza. W. Dilthey—Aus den Rostocker Kanthandschriften. Jahresbericht (L. Stein, B. Erdmann, W. Dilthey, P. Deussen). Neueste Erscheinungen.

PHILOSOPHISCHES JAHRBUCH.—Bd. ii., Heft 3. G. Grupp—Die Anfangsentwickelung der geistigen Cultur des Menschen (iii.). J. Pohle—Der neueste Sturmlauf gegen die heidnischen Classiker u. gegen die humanistische Bildung überhaupt (ii.). [The modern attack on classical education is traced to aversion from ideals (which appears to the author to be connected with the prevalence of materialistic philosophy), to the spirit of revolt against authority, and (in part) to wrong methods of teaching and to defects in the advocacy of the classics by philologists.] M. Sierp —Pascals Stellung zum Skepticismus (ii.). [Recognitions of various "fundamental certitudes" are cited from Pascal's *Pensées* by way of argument against his being set down as a philosophical sceptic.] Recensionen und Referate. Philosophischer Sprechsaal (Th. Isenkrahe —Zur Kritik der thomistischen Erkenntnisslehre). Zeitschriftenschau. Miscellen und Nachrichten.

X.—NOTES.

PHILOSOPHY IN RUSSIA.

The appearance of the first Russian philosophical Review,[1] *Voprosy philosophii i psychologii* (the projection of which by the Moscow Psychological Society was referred to in MIND xiv. 313), gives occasion for making the English public acquainted with the state of contemporary philosophy in Russia.

At the end of the eighteenth and the beginning of the nineteenth century, the more intelligent part of Russian society followed the French Encyclopedists. Then fear of the ideas proclaimed at the French Revolution, the struggle with Napoleon and other causes evoked a reaction, which took the form of a strong mysticism. The Government persecuted philosophy as a very dangerous thing; society was not interested in it. Not till the fourth decade of the present century did the interest in philosophy revive. Hegel then became the idol of a talented and influential group in Russian society. Two eminent men, Bielinsky and Hertzen, were at the head of the movement. Bielinsky, who may be described as a Russian Lessing, set forth his views in critical articles. Hertzen was a brilliant publicist. Thus Russia had not yet philosophers *pur sang*, but only philosophising critics and journalists. At the end of the seventh decade of the century, Russian society at last found good teachers. Auguste Comte, John Stuart Mill, Lewes and Mr. Herbert Spencer became the favourite authors in Russia. If Comte was not translated into Russian, the cause was not his want of popularity, but the formal prohibition of the censorship.[2] But the public became acquainted with Comte's system through the works of Mill and Lewes on Comte, and through many articles of positivistic tendency. Almost all Mill's works have been translated and greatly appreciated. Lewes's *History of Philosophy* has been translated several times. His *Problems of Life and Mind* also has appeared in Russian. Finally, almost all the works of Mr. Herbert Spencer have been translated, and, at the time of which I am speaking, Mr. Spencer became the most popular philosopher in Russia.

But this current did not obtain unquestionable and definitive supremacy. I cannot say that the Spencerian philosophy is not popular now, but neither Mr. Spencer nor the positive (I use the word in its widest sense) philosophy has such a prevailing influence as before. A great

[1] Strictly speaking, it is the second Russian philosophical Review. The first attempt to establish a journal of this kind was made by M. Kozloff, Professor in the University of Kiev; but his Review had no contributors except the Editor. After a year's existence (1886) it was suspended in consequence of a serious illness of M. Kozloff.

[2] Thus, some years ago, I translated and wrote an introduction to the first two chapters of the *Cours de Philosophie Positive*, and tried to get the little book published. But the censorship put a veto on it. Its motives were interesting. I was told formally that my book could not be published because Comte entrusts the law of gravity with the destiny of mankind.

many other philosophical schools find adherents in Russian society, and altogether the mental tendencies have become entangled and confused.

So much for the public. As for the authors themselves, I can only mention three who profess the positive or scientific philosophy. They are: MM. Lesevich, Troitzky and de Roberty.[1]

M. Lesevich published in 1877 a work which is a critical review of Comte's philosophy. In his introduction the author repeats the words of Schopenhauer: "It is easier to point out the mistakes and delusions of a great mind than to give a clear and full account of its qualities". These words give a correct idea of the attitude of M. Lesevich towards Comte. M. Lesevich says: "In undertaking the critical review of Positivism, I do not try to invent an original Russian philosophy, but strive only to profit by the results obtained by the West-European philosophy so far as it appears scientific". The author is an adherent of the new German Critical philosophy. Carl Göring, author of a *System der kritischen Philosophie*, seemed to be at that time his favourite philosopher. The second philosophical work of M. Lesevich was his *Letters on Scientific Philosophy*. Here, as in his articles, which are now being printed under the title "What is Scientific Philosophy?" he sets forth the views of the new German Critical school, especially those of Göring, Laas, Avenarius and Riehl.

M. Troitzky, in his three philosophical works, *German Psychology of the Century*, *Science of Mind* and *Manual of Logic*, is an adherent of the English philosophy, especially of Prof. Bain.

M. de Roberty, in his two works, *L'ancienne et la nouvelle Philosophie* (which appeared in Russian and in French) and *L'Inconnaissable* (which did not appear in Russian on account of difficulties with the censorship), adheres to the school of Littré and Wyrouboff.

Passing now to the exposition of the articles in the first number of *Voprosy philosophii i psychologii*, I may mention that MM. Lesevich and Troitzky are amongst the contributors to the Review. The brief account

[1] I speak here only of philosophers *pur sang*, and therefore do not mention such writers as MM. Mihailovsky, Karieeff and others. M. Mihailovsky is a very popular and talented journalist. It is as an ardent student of sociology that he might claim a place among philosophers. The following is a summary of his sociological views. First, he defends the subjective method (the word 'subjective' being used nearly in the sense in which it is applied to Comte's later phase). Second, he will have nothing to do with the doctrine which considers society as an organism. Both these views of M. Mihailovsky led him to an energetic, but, to my mind, unsuccessful, attack on Mr. Spencer. His third view consists in the rejection of the predominance of the struggle for life as a sociological factor. It is to be noticed that M. Mihailovsky is not at all an adversary of Darwinism in biology; but in sociology he opposes to the theory of struggle for life a theory of struggle for individuality. Unfortunately, this doctrine of M. Mihailovsky has not received harmonious development and is not free from perplexity and vagueness. M. Karieeff, Professor of History in the University of St. Petersburg, has written a voluminous work, *The Ground-problems of the Philosophy of History*, of which the third volume has come out recently. He also is a partisan of the subjective method, thanks to which the philosophy of history appears in his work as a kind of scientific theodicy of progress.

of the contents of the articles will be preceded by a short *curriculum vitæ* of the authors.

(1) Prof. Nicholas Grote (Editor of the Review).—It is rather difficult to define the philosophical position of Prof. Grote. In his first work (not counting his pamphlets), *The Psychology of the Feelings*, Prof. Grote follows Mr. Spencer in regarding pain as an excessive or insufficient activity and pleasure as a moderate activity. After publishing his second work—*Contribution to the Reform of Logic*—he went on to expound his views in pamphlets, public lectures and newspaper articles, in which he treated of the most various subjects, as, for example, Pessimism, Progress, the Soul, Classification of the Sciences, &c. To give an idea of the evolution of Prof. Grote's philosophy, I may relate the following episode. In consequence of one of Prof. Grote's pamphlets, Nicanor, Archbishop of Odessa (author of a voluminous work on Positivism, or, better, against Positivism), congratulated him on having become a spiritualistic philosopher. To this Prof. Grote answered by an article on his own philosophy, which he characterised by this metaphor: As the traveller round the world has to become, at a certain moment, the antipodes of himself, so the philosopher, inquiring into all questions, has to become, at a certain moment, his own antagonist.

In the new Review, Prof. Grote has an article "On the Aims of this Review". He put the question: What will the Russian nation contribute to philosophy? and answers it as follows: The ideal of philosophy consists in the reconciliation of science, art and religion. To that every philosophy tends. But the philosophy of Greece conciliated harmoniously the ideals of truth, goodness and beauty from the point of view of beauty. Contemporary West-European philosophy tends to the same harmony from the point of view of truth. It is left for the Russian nation to put on the first plane the moral interests of life.

(2) M. Vladimir Solovieff.—M. Solovieff is much more of a theosophist than of a philosopher. He began with *The Crisis of European Philosophy against Positivism* (1874). "The conviction," he says, "that philosophy as abstract, purely theoretical knowledge, has finished its evolution and fallen irrevocably into the world of the past, forms the basis of this book." It would be easy to give a positivistic meaning to this sentence; but that would be a grave misunderstanding. M. Solovieff's meaning is diametrically opposed to Positivism. He aspires to a "complete and universal solution" of the problems that have occupied philosophy. In his second philosophical work—*Critique of Abstract Principles*—M. Solovieff discovers that "the real organisation of true knowledge as a free theosophy is determined by the resolution of another great problem—the organisation of our own activity or the realisation of the divine principle in the being of nature". After that, M. Solovieff cast off even the vesture of a philosopher and came out in his true colours as a theologian; see his work *La Russie et l'Eglise Universelle.*

M. Solovieff has an article in the new Review on "Beauty in Nature". Here he finds that "the cosmical mind in manifest opposition to the primordial chaos and in secret agreement with the world's soul or nature—a soul which more and more submits to the mental suggestion of the architectonic principle—creates in it and through it the complex and beautiful body of our universe. This creation is a process which has two ends profoundly connected with each other—a specific end and a general end. The general end consists in the incorporation of the effective idea, that is, light and life, in different forms of nature's beauty; the specific end is the creation of man."

(3) Prof. A. A. Kozloff.—The philosophical thought of Prof. Kozloff has

gone through a succession of phases which is the inverse of the historical movement of philosophy. He began as a translator and admirer of Hartmann; then, after attaching himself to Schopenhauer and Kant, went back to Leibniz. His first original work was his *Philosophical Studies* (pt. i., 1876, pt. ii., 1880). The purpose of his studies was to prove that philosophy is a separate and independent science, to give a definition of the conception of philosophy (according to Prof. Kozloff, the science of the world as a whole), and to indicate its method. (The second study deals with the method of Plato's philosophy.) Prof. Kozloff's second work was *Philosophy as Science* (1877)—a polemical work written in defence of the first part of his *Studies*. In 1878, he published *The Philosophy of Reality*—an exposition and criticism of Dühring. Then came the following works: *Genesis of Kant's Theory of Space and Time*, *The Quarterly Philosophical Review* (a Review which existed only one year), *Outlines of History of Philosophy*, and two Nos. of (*My*) *Own Word*—a magazine which appears in place of the *Quarterly Philosophical Review*, at uncertain intervals. In these works the return to Leibniz may be observed. In the *Genesis, &c.*, the author proves, amongst other things, that Hume's influence upon Kant was principally negative, and that most of Kant's definitions of time and space may be reduced to the definitions of Leibniz and Newton. In his *Outlines* Prof. Kozloff reduces all systems to (1) philosophies of absolute being and (2) philosophies of absolute change. To the first category he refers Spiritualism and Materialism; to the second, Positivism, Phenomenalism, Evolutionism and Sensualism. Prof. Kozloff predicts the inevitable ruin of the second category, after which a short struggle between materialism and spiritualism will lead to the definite supremacy of the philosophy which seeks an "absolute principle in the region of mind". The greater part of his *Own Word* is filled with "Dialogues with the Petersburg Socrates," in which he attacks the materialists, but especially falls upon Hume. The greatest part of the second No. is taken up with criticism of Hume's and Kant's views on existence.

To the new Review Prof. Kozloff contributes "Meditations called forth by an unexpected voice from the region of Natural Science". The call comes from Prof. Bunge of Basel, who in his work, *Lehrbuch der physiologischen und pathologischen Chemie* (Leipzig, 1887), has touched upon the question of vitalism and mechanism, and has given utterance to the opinion that mechanism cannot explain all the phenomena of life. Prof. Kozloff greets with pleasure this confession of a naturalist, and points to teleology as the only issue for philosophy and science.

(4) Prince Troubetzkoi.—A beginner. In one of the notes to his article in the Review he announces the recent appearance of his book *Metaphysics in Ancient Greece*. His article is "On the Nature of Human Consciousness". "The supreme principle of modern philosophy," he says, "is the idea of personality. Its criterion is personal conviction; its point of departure, personal consciousness in the threefold form of—personal revelation (reform of the German mystics), personal understanding (Descartes' reform), and personal experience (Bacon's reform)." The author brings up the question, whether consciousness is always personal, and answers that the human consciousness is not only a personal but also a collective function of mankind.

(5) M. Shishkin contributes the first part of an article on "Psychophysical Phenomena from the point of view of Mechanical Theory".

(6) M. Nicholas Lange.—Author of *History of the Moral Ideas of the Nineteenth Century* (only the first part yet published). In this work the

author appeared as an adherent of Kant's ethics, to the formalism of which he, however, objects.

We have in the Review his psychological observations on the effects of hashish, which he tried upon himself in Wundt's laboratory.

(7) M. Lesevich (of whom I have already spoken).—He has in the Review an article on "Religious Liberty according to the edicts of King Asoka the Great". It is to be noted that M. Lesevich is now zealously studying Buddhism.

Of the authors announced as contributors to the Review, but who have nothing in the first number, I will mention only Count Tolstoi and M. Strahoff.

There is not an author in Russia about whom so much has been written lately as Count Tolstoi. It would be an error, however, to speak of a philosophy of Count Tolstoi, and of the influence of this philosophy upon Russian society. Neither Count Tolstoi nor his followers have any interest whatever in philosophy; they are even indifferent to ethics as a science. All their attention is drawn by the practical question, how life is to be ordered so as to respond to their moral feeling (and they mean their own lives, for Count Tolstoi rejects political activity). If Count Tolstoi sometimes tries to maintain his teaching by theoretical reasons, he does it very faintly and superficially, but his disciples are not at all troubled, for their hearts burn with true sectarian faith. Even from the practical point of view Count Tolstoi's teaching scarcely presents anything new, and all his success is explained by the fact that he has lent his great and famous name to a movement that had begun long ago.

As to M. Strahoff, that zealous Slavophil, author of *The Strife with the West* (of Europe) *in our* (Russian) *Literature* and some other works—a philosopher for whom the *Cogito ergo sum* of Descartes is still the point of departure—I mention him only because I want to say a few words about Philoslavic philosophy.

Strictly speaking, there is no such thing as Philoslavic philosophy, because the most talented and influential Slavophils have been much more inclined to theology than to philosophy. Indeed, there could not be a Philoslavic philosophy, because of the want of anyone amongst all the Slavophils capable of severely logical reflection. Amongst them have been some incontestably talented men, but they have all been of an inconsequent, nebulous, exceedingly irrational mind: men who mostly lived on sentiments—romantic worship of old Russia, and, what is more, of an old Russia which was created by their own imaginations.

P. K. Mokievsky.

The Aristotelian Society for the Systematic Study of Philosophy (22 Albemarle Street, W.).—The Eleventh Session commenced Monday, Nov. 4, with an address from the President on the subject "What is Logic?" Monday, Nov. 18, a paper by Mr. S. Alexander on "Scepticism"; Monday, Dec. 2, a paper by Mr. Bernard Bosanquet on "The Æsthetic Theory of Ugliness". Both papers were followed by a discussion.

The Executive Committee has just issued a circular in which it commends the Society "to the support of all those who take an interest in the subject of Philosophy, and are desirous of seeing the study of it strike a deeper root and obtain a wider influence in this country". The Society "provides for students of all shades of opinion a means of

meeting on equal terms and discussing philosophy in common under both its aspects, theoretical and historical". Residents in town or country, wishing to be nominated for membership, are invited to communicate with the Hon. Secretary, Mr. H. Wildon Carr.

Part xiv. of *Proceedings of the Society for Psychical Research*, issued last June, had, besides a short address from the President, Prof. H. Sidgwick, for its chief contents, a paper "On Apparitions occurring soon after Death," begun by the late E. Gurney and completed by F. W. H. Myers; "Recent Experiments on Crystal Vision" (anonymous); and "Automatic Writing: iv. The Daemon of Socrates," by F. W. H. Myers. No. 4 (vol. i.) of *Proc. of the American Society for Psychical Research*, issued last March (Boston, U.S., Damrell and Upham), had, among many other Reports or Notes of remarkable interest, a long "Report of the Committee on Phantasms and Presentiments" (with supplementary Note) by Prof. J. Royce, which should not be overlooked by any of those who remember his very striking paper on "Hallucination of Memory and 'Telepathy'" in MIND xiii. 244.

The organisation of psychological research and of philosophical instruction continues to make good progress in America. In point of instruction, a very comprehensive scheme is now being worked at the New York Columbia College by Prof. N. M. Butler (assisted by Mr. J. Hyslop). The new Clark University at Worcester (Mass.), under the headship of Dr. Stanley Hall, promises a still greater activity of psychological research than marked his Baltimore professorate. Also, at the University of Pennsylvania, Prof. J. McK. Cattell has, in connexion with the flourishing School of Biology, secured a position and establishment for conducting effective research.

Paris has now, at the Sorbonne, its Laboratory of Physiological Psychology, under the direction of Prof. H. Beaunis. At Florence, there has been added to the Museum of Anthropology and Ethnography, by royal decree, a Psychological Museum under Prof. Mantegazza, for bringing together all kinds of objects or documents that may throw light on "human passions," or (as it is also described) "psychology of *men*," in distinction from "psychology of *man*".